The Department of Civil and Environmental Engineering is always interested in how our alumni are doing. We hope you will take time to complete the Alumni Update information below. Please include information on your recent professional and personal developments, along with a high-quality photo if available. Please email your information to jmueller@lsu.edu or mail submissions to Civil and Environmental Engineering, Louisiana State University, 3418 CEBA Building, Baton Rouge, LA 70803-6405.

Name: __________________________________________ Year of Graduation: ____________

Home Address: __________________________________________

Home Telephone: _____________________________ Email: ___________________________

Company: _____________________________________________ Title: _______________

Business Address: __________________________________________

Business Telephone: _____________________________

News: ___________________________________________________________________________________

The University Planning Council, composed of top faculty and senior administrators across campus, recommends programs for designation as Foundations of Excellence based on rigorous assessment of written documents and an oral presentation provided by each department to the council. Among the criteria for selection were the national and international reputation for the individual faculty and graduate programs, the centrality of the programs to the academic mission of LSU, and the trajectory of progress a program has experienced in recent years.

"Many excellent proposals were submitted and this was a difficult decision for the UPC, so the departments selected should be proud of this accomplishment," said Silverman. "The UPC was committed to selecting the best of the best to become Foundations of Excellence, and the group did a very thorough and commendable job."

The Civil and Environmental Engineering department has experienced astonishing growth since 1979. The department includes faculty members in six areas of specialization (both at the undergraduate and graduate level): environmental engineering systems, geotechnical and geophysical systems, transportation engineering and geoinformatics, material modeling and visualization, structural engineering and mechanics, and water resources engineering systems.

The department maintains state of the art laboratories in Remote Sensing, Hydraulics, Mechanics of Materials, Photogrammetry, Water Resources Research, Environmental Engineering and more. Other faculty resources include access to many other marine/estuarine research facilities of the Louisiana Agricultural Experiment Station and Louisiana Universities Marine Consortium facility as well as Environmental engineering's collaboration with engineers and scientists on-campus, nationally and internationally. These resources enable the department to conduct nationally competitive research as well as generate nationally competitive graduates.

ALUMNI REGISTRATION

The comments received from the University Planning Report Committee were gratifying and exceptionally encouraging to the department. The designation of a program as a Foundation of Excellence has a 5 year term and therefore the ultimate goal of the department is to become a permanent, life member of this elite group. The faculty and staff as a whole are committed to continuing the improvement and advancement of the department. The success and growth of the department in the recent years is only a small indication of what is to come for CEE.

This exciting news was announced to the department on June 28 and was celebrated with a banquet. The faculty and staff enjoyed an afternoon snack and an opportunity to relax in this great accomplishment of the department. Dean Zahi Bessououn and Chair George Voyiadjis extended their gratitude to the faculty and staff (both current and former) for their hard work and dedication to which the success is attributed.

As always, we thank the alumni and friends of CEE for your continued support, as it is vital to the betterment and the future of this department. Our success is shared with all of you!

For more information about Foundations of Excellence, visit www.lsu.edu/foundations

Quote from the Foundations of Excellence website
The Department would like to congratulate all of our 2007 Spring graduates who, along with family and friends, attended the May 18, 2007 commencement ceremonies.

Students Receiving University Honors
For outstanding academic performance in their undergraduate studies

Students who received University Honors for outstanding academic performance in their graduate studies included Rick Alton Nugent and Catherine Frances Flarity.

Rick Alton Nugent (pictured left) graduated Summa Cum Laude, an honor bestowed upon students who graduate with a grade point average between 3.9 and 4.0. Mr. Nugent also received the University Medal for "Highest Academic Achievement" for graduating with a perfect 4.0 grade point average.

Catherine Frances Flarity graduated Cum Laude, an honor bestowed upon students who graduate with a grade point average between 3.7 and 3.79.

Bachelor of Science in Civil Engineering
Christopher Steven Adams
Marvin Eugene Bowman III
Daniele Renae Chabaud
Thomas Aaron Davidson
Davay E. Espinet
Joel Albert Fulmer V
Monica Patricia Kelly
Erin Ashley Malone
Jordan Paul Moritz
Heather Deans Patton
Louis Warren Thompson
James Elliot Bauer
Hastly Gregg Brown
Jeffery C. Chatelein
Lindsay Elizabeth Dunon
Catherine Frances Flarity
Randy Louis Gros
Ethan LeBlanc
Rick Alton Nugent
Jonathan Kendall Perry
Jillian Leigh Titus
Carla Anne Berard
Matthew Stephen Brunet
Nathan Charles Cobo
Rebecca Barrileaux Edwards
Mary Elizabeth Friedmann
Heather Ivy Keith
Dustin Matthew Malbrough
Anthony Joseph Markiwicz
Nicholas M. Okubo
Michael Frank Rouuke

Bachelor of Science in Environmental Engineering
Ryan A. Hearn
John Daniel Rhodes
Tiffany Anne Hopper
Glenn Paul Leduc, Jr.
Tyler L. Taigue

Master of Science in Civil Engineering
Kodi LaDhae Collins
Vineet Katyar
Borja Servan Canas

Doctor of Philosophy in Civil Engineering
Kevin Abraham
"Three Dimensional Behavior of Retaining Wall Systems" (Mr. And Mrs. C.W. Armstrong, Jr., and Wilbur D. and Camilla V. Fugler, Jr., Professor of Engineering R. Richard Avent and Adjunct Professor Robert Ebeling)

Munir Danesh Nazzal
"Laboratory Characterization and Numerical Modeling of Geogrid Reinforced Bases in Flexible Pavements" (Assistant Professor Mural Y. Abu-Farsakh and Professor Louay N. Mohammad)

Emerald Purser Roiser
"Locally Derived Nonpoint Loading Estimates for the Bueil River/Bayou Labouche Watershed" (Rubicon and Effie C. and Donald M. Hardy Professor of Engineering Donald Dean Adrian)

Kurt D. Shinkle
"Readjustment of a Regional Geodetic Leveling Network to Account for Temporally and Spatially Variable Vertical Displacement of Benchmark" (Fruhan Family Professor in the College of Engineering Roy K. Doks)

Zhenghong Zhang
"Design and Evaluation of Automated, Continuous Culture Techniques for Brachionus rotundiformis" (Formosa Plastics Corporation Endowed Professor Kelly A. Rusch)

Congratulations and best wishes to all of the Spring 2007 Civil and Environmental Engineering graduates!

Contributions to the Newsletter are always welcome!
If you have news that would be of interest to faculty or alumni, please send it to us so it can be included in a future edition.

Please send your submissions to Julie Mueller at jmuller@lsu.edu

FUNDING OPPORTUNITIES
YES, count me in!
I want to donate to the:
- o Civil and Environmental Enrichment
- o Civil and Environmental Engineering Siss Endowment Fund

Here’s my contribution of:
- o $10,000
- o $5,000
- o $2,000
- o $1,000
- o $500
- o $250
- o $___________

Payment:
- o Check enclosed — Please make check payable to: LSU Foundation/Civil & Environmental Engineering
- o Credit card (Circle one):
- o Visa
- o MasterCard
- o Discover
- o AmEx

Account number: __/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/__/____
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Name as it appears on card: _______________________
Signature: _______________________

Note: If your/your spouse’s employer has a Corporate Gift Matching Program, you may be able to double or even quadruple your gift! Please contact the employer’s human resource office for more information. Your gift is tax deductible to the fullest extent allowed by law.

Payment: Please send this completed form to: Civil and Environmental Engineering, Louisiana State University, 3418 CEBA Building, Baton Rouge, LA 70803-6405

Payment: Please fill out the information on the back of this form also.

New CEE Website Launched
The CEE department has recently launched a new website, www.cee.lsu.edu, designed and created by Dr. Ishak, a faculty member in the CEE department. This new website offers distinctive services to both students and faculty while exhibiting a more professional design. Built with the latest technology stack of MS SharePoint Services, the new site provides a powerful and flexible tool to communicate information among students and faculty.

The website will support certain undergraduate and graduate program services such as electronic student advisement, semester course scheduling, online ABET surveys, etc. Students and faculty may sign in via the Backstage feature and subscribe to receive automated alerts on special updates or changes to the website. The website also offers support for Really Simple Syndication (RSS) feeds from most site contents such as announcements, lists, calendar events, etc.

Also, the new CEE website includes an Alumni Guestbook. We encourage all CEE alumni to leave a brief update so that the department and fellow alumni can see where life has taken you! This is only the first step in our efforts to use the CEE website as an alumni resource for interaction with the department.

Overall, the new site offers enhanced features and functionalities that, once implemented and utilized to their full potential, are expected to improve the way the CEE department is doing business and the department’s interaction with both potential and current students. Please visit the new website to find out the latest information about the CEE department, get information about graduate and undergraduate programs, find the most up-to-date information about organizations, contact faculty and staff, and much more!

Contributions to the Newsletter are always welcome!
If you have news that would be of interest to faculty or alumni, please send it to us so it can be included in a future edition.

Please send your submissions to Julie Mueller at jmuller@lsu.edu

Find out the latest information about the Civil and Environmental Engineering Department, visit: www.cee.lsu.edu

Volume 6 • Summer Issue • July 2007

STUDENT NEWS
CCEE Spring 2007 Commencement

STUDENT NEWS

Contributions to the Newsletter are always welcome!
If you have news that would be of interest to faculty or alumni, please send it to us so it can be included in a future edition.

Please send your submissions to Julie Mueller at jmuller@lsu.edu

Find out the latest information about the Civil and Environmental Engineering Department, visit: www.cee.lsu.edu
Wal-Mart Laboratory for the Study of Pollution Control

Joseph W. Carmena, Sr. Memorial Scholarship

Mary Virginia provided an endowment for the Department that would markedly expand the department’s capacity for students to perform hands-on experiments as an important part of their formal coursework. The infrastructure would also allow student and faculty to perform research vital to the betterment of the department.

John and Mary settled in Fort Worth, Texas in the 1950’s where they had four children: John Edwin Jr., Philip Webb, Mary Susan and Melissa Anne. His engineering interests and education landed him a job at Boeing in Seattle in 1957. The family moved into a home, built by John and Mary themselves, on Mercer Island, a suburb of Seattle, in 1960. Though John and his family embraced the Pacific Northwest and remained on Mercer Island, John always remained a great Tiger fan.

In 2006, as part of its 125th anniversary, the Dutch Company Royal Haskoning published the Delta Competition, which encourages unexpected solutions to these issues and problems that would contribute to the sustainable development of delta areas. The Delta Competition, which encourages talented students to devise new and innovative ideas that represent the most promising ideas presented in this competition. Among the five selected was the Hydrological Flood Forecasting System for Mesoamerica proposed by Jose Edgar Villalobos-Enciso.

In 2006, as part of its 125th anniversary, the Dutch Company Royal Haskoning published the Delta Competition, which encourages unexpected solutions to these issues and problems that would contribute to the sustainable development of delta areas. The Delta Competition, which encourages unexpected solutions to these issues and problems that would contribute to the sustainable development of delta areas.

Jose Edgar Villalobos Enciso, enrolled as a Ph. D. student in the Department of Civil and Environmental Engineering since August 2003, worked under the direction of internationally renowned hydrologist Dr. Vijay P. Singh. Villalobos’ research will result in the development of a quasi-real time flood forecasting system for South Mexico and the 7 Central America Countries. The manuscript is published in the book Innovative Solutions for the Delta, published by the Royal Haskoning Press of the Netherlands.

Awarded with a $150,000 travel award from the LSU Graduate School and support from the CEE department, Villalobos’ research was also presented in the 32nd International Symposium of Remote Sensing of Environment held in San Jose, Costa Rica June 25-29.

This CEE graduate student was born in Guadalajara, Jalisco, Mexico. In 1983, he graduated in Civil Engineering at the Universidad Autónoma de Chiapas, in Mexico. After graduation he joined the Laboratory of Experimental Hydraulics at the Comisión Federal de Electricidad in Chiapas, where he worked until 1984. There, Villalobos was involved in the designing, construction and operation of physical hydraulic models for various hydro-geotechnic projects to be constructed in different parts of Mexico.

From 1984 to 1996, Villalobos joined the Mexican Ministry of Foreign Affairs, in the Mexican Section of the International Boundary and Water Commission between September 1996 to August 1998, Villalobos was enrolled in the International Institute for Infrastructure, Hydraulics and Environmental Engineering (IHE). The Netherlands, where he obtained the Master of Engineering (1997) and Master of Science (1998) degrees.

Since 1998, he joined the Hybrid and Sani-
Deep South Conference Coming to Baton Rouge March 2008

This newsletter has been relaying the successes of our ASCE Student Chapter teams in regional and national conferences. Next year, it will be different. The regional conference, The Deep South, will be hosted by LSU ASCE Student Chapter. What does that mean? First, it means that many of our alumni will be able to experience the event first hand rather than through third party reporting. This does not happen very often. If you miss this chance, you will have to wait until the Year 2020 for the next round when LSU hosts again. We expect you to come and bring your family to cheer the Steel Bridge team or for a fun day by the lake watching the Concrete Canoe races. There will also be a "mystery" event; something to look for.

It also means that your help will be needed. Remember, our students are volunteering their time and effort to represent LSU. In some cases, they will need help and this is where you come in.

- **Fundraising:** The event hosts around 12 universities (approximately 300 participants). This requires a lot of planning and resources. Our students will be aggressively fundraising to make the event a success. If you know of a potential sponsor, please contact us immediately.

- **Volunteers:** Volunteers will be needed at different levels and in numbers. One of the most important categories is "Judges." Professional Engineers are sought for this task. Prior experience with the competitions is not a requirement. After all, next year’s rules are not yet out. Judges will be informed of the rules, trained on the procedures and provided with the resources to make their job a pleasant one. Volunteers representing all participating schools and beyond are welcome. In addition to this important category, we will also need volunteers to assist in the planning and management of the event. As you can see, we need all the help we can get. Any and all help is greatly appreciated and vital to making this event a success.

- **Ideas:** The success of the conference will heavily rely on our creativity. By "our," we mean all of us. Sharing your ideas with the management team is instrumental in making our conference stand out. We welcome and look forward to hearing all of your ideas; all of them. So please, do not hesitate to contact us.

**How can you help?**

**Fundraising:**
- Volunteers representing all participating schools and beyond are needed. Your help is required at the levels of planning and execution.

**Volunteers:**
- Volunteers will be needed at different levels and in numbers.

**Ideas:**
- The success of the conference will heavily rely on our creativity. By "our," we mean all of us. Sharing your ideas with the management team is instrumental in making our conference stand out.

**WHERE ARE THEY NOW?**

**Koby Jude Coulon,** a graduate of LSU in Civil Engineering in 2001, was awarded his Professional Engineering License by the Louisiana Engineering Board at a recent ceremony in Baton Rouge. Mr. Coulon is a civil engineer for Gilchrist Construction in Alexandria, Louisiana.

**ALUMNI CORNER**

**Dr. Munfakh Featured in Tunnel Business Magazine**

Dr. George A. Munfakh, LSU CEE alumni and 2004 Hall of Distinction member, appeared in the December 2006 issue of Tunnel Business Magazine. The article, titled “Connecting the Past & Present with State-of-the-Art Solutions,” highlights the foundation, successes and future of the world-renowned consulting firm Parsons Brinckerhoff Inc. of which Dr. Munfakh serves as Senior Vice President and Manager of PBI’s Geotechnical and Tunneling Group.

Dr. Munfakh received his Bachelor of Science degree in civil engineering from the University of Aleppo, Syria in 1987. He then received his M.S. in 1979 and Ph.D. in 1983, both from Louisiana State University.

Joining Parsons Brinckerhoff Inc. over 30 years ago, Dr. Munfakh’s project experience includes underground, marine and surface facilities. He is also considered a worldwide expert in ground improvement, of which he is a regular keynote speaker at conferences. Today, Dr. Munfakh has established himself as one of the leading innovators in the field of geotechnical engineering and rightfully so.

Dr. Munfakh’s professional affiliations include the International Society of Soil Mechanics and Geotechnical Engineering, the American Society of Civil Engineers, Chi Epsilon, and Phi Kappa Phi. He also served as chairman of the 2005 National Competition in Orlando, FL

**Deep South Schools**

Arkansas State University
Christian Brothers University
Louisiana State University
McNesse State University
Mississippi State University
Southern University
Tulane University
University of Louisiana at Lafayette
University of Memphis
University of Mississippi
University of New Orleans
University of Tennessee – Martin

**The Tempest: LSU’s concrete canoe in action during the 2006 National Competition in Stillwater, OK**

So, mark your calendars for the last week in March 2008. Further details will be announced and distributed to you as they become available.

And remember: We count on you!

**ALUMNI CORNER**

**L. Lane Grigsby, Chair-man of the Board of Cajun Constructors and a CEE Alumnus, was recently featured in The Greater Baton Rouge Business Report. Gracing the cover and cleverly labeled "Citizen Lane", Grigsby is deemed by this lo-cally popular publica-tion as "one of the most influent men in Louisiana politics".**

Grigsby, a native of Louisiana, started Cajun Constructors in 1980. As an active participant in community affairs, Grigsby founded the Pelican Chapter of The American Society of Civil Engineers. The Baton Rouge March 2008

**Grigsby Featured In BR Business Report**

This issue features L. Lane Grigsby, a Louisiana native, started Cajun Constructors, in partnership with Bob Mixon. Over the ensuing years, Cajun has grown to become one of the largest construction com-panies in the state.

Grigsby also founded Atlantic Company of America, a nationally recognized historical restoration business, and Magp Construction, Inc., commercial contractor based in Baton Rouge.

Realizing that being involved in politics was important, if not necessary, to develop and sustain a successful business in Louisiana, Grigsby has established himself as a known player in local and state politics, both as a businessman and as an actively involved voter. Grigsby is known for knowing whom he deems the best fit candidate rather than sim-ply backing a particular party, his support is always genuinely placed and well-sought.

Grigsby has been actively involved in just about every election mayoral, Metro Council and House or Senate Race since 1980.

As an active participant in community affairs, Grigsby founded the Pelican Chapter of The American Society of Civil Engineers. The Baton Rouge March 2008

**The Greater Baton Rouge Business Report**

Focusing his support on whomever he deems the best fit candidate rather than simply backing a particular party, his support is always genuinely placed and well-sought.

Grigsby has made his mark on Louisiana in more ways than one and this recent highlight in The Greater Baton Rouge Business Report is only one reflection of his level of involve-ment in political and community affairs. His carefully directed passion and strong level of involvement wherever passion is placed, has been the key to his success and will en-sure that it continues.

To view the article, visit The Greater Baton Rouge Business Report online at www.businessreport.com

**FOR MORE INFORMATION ABOUT ASCE, VISIT WWW.ASCE.ORG**
The Civil and Environmental Engineering Department held its annual banquet on April 20, 2007. The banquet was held at the University Faculty Club in Baton Rouge, LA and was a great success. During the event, faculty awards were presented and new Hall of Distinction members were inducted.

Chi Epsilon News and Chapter Updates

The Louisiana Alpha chapter of Chi Epsilon at Louisiana State University proudly inducted twenty-three new members in the Spring Semester of 2007. This initiation also brought forth a new officer as Lauren Johnson was selected to be the chapter’s marshal. The continuing officers led by Stuart Adams (president), Christopher Siverd (vice president), Kate Landrum (secretary), Ellen Buhe (treasurer), and Kevin Chenier (associate editor) are pleased to welcome Lauren to the group.

The Spring Semester of 2007 activity highlight took place Thursday, March 15th, 2007, as Chi Epsilon participated in a one day playground build at Highland Elementary in Baton Rouge, LA. This project was organized by LSU, KaBoom! (www.kaboom.org), and The Home Depot. Volunteers were assigned such tasks as mixing concrete, shoveling mulch, and/or assembling playground equipment. The project was completed by 2:00pm thanks to the help of Chi Epsilon, ASCE at LSU, LSU’s Tau Beta Pi Chapter, the LaSTEM Research Scholars, the LSU Biological Engineering Department, City Works, The Home Depot, and KaBoom! Chi Epsilon would like to specifically thank Katie Rousseau, Kyle Bridges, and Dr. Marybeth Lima from the LSU Biological Engineering Department for their help.

Also, Chi Epsilon is excited to announce the launch of their new website. To learn more about Chi Epsilon at LSU, please visit www.lsu.edu/student_organizations/chiepsilon/index.html. Here you can learn about upcoming events, check out past events, find out how to join the chapter, and much more!

Rick A. Nugent Receives Dual Clayton Excellence Awards

An incoming graduate student, Mr. Rick A. Nugent, received two Donald W. Clayton Excellence Awards—the Clayton Engineering Excellence Award for Outstanding Undergraduate Students and the Clayton Graduate Assistantship Supplement Award. Both awards were established through an endowment by LSU graduates Donald W. and Gloria P. Clayton to support the College of Engineering in its quest for excellence.

Nugent graduated from the CEE Department at LSU in Spring 2007. During his 4 year undergraduate study at LSU, Nugent participated in a wide variety of community activities and services and showed great leadership. He has served as an excellent role model for the College of Engineering. Nugent has a cumulative GPA of 4.00/4.00 and obtained excellent MCAT (37/45, top 2%) and GRE (1430/1600) scores. Even though he has completed pre-medicine curricula at LSU, he still stays in engineering and wants to enter the teaching profession. For graduate study, he will be conducting research on the interaction between coastal sediments and biofilms and biopolymers, which is expected to develop more environmentally benign and economic techniques for coastal wetland restoration and sediment erosion control. His extensive background in biological sciences, organic chemistry, and nanomechanics will help him succeed in his pursued research.

Jason Fennell Awarded 2007 Donald W. Clayton Excellence in Engineering Award

Jason Fennell was awarded a 2007 Donald W. Clayton Excellence in Engineering Award. This award recognizes students who have demonstrated exemplary character, scholarly accomplishment, leadership, and has served as a role model and ambassador for the College of Engineering. Jason worked in the LSU Wind Tunnel Laboratory for four years and was the lab manager for two years. Jason is also active in the LSU student chapter of ASCE. He was a member of the Steel Bridge team in 2005 and was captain of the team in 2006. Jason graduated in December, 2006 and is currently pursuing a Masters of Civil Engineering with a focus on Structural Engineering. He is also pursuing a Graduate Minor in Disaster Management. He hopes to focus on areas of damage mitigation to engineering infrastructure due to hurricanes.
NSF Recognizes LSU Coastal Engineering Research

The Fluid Dynamics and Hydraulics Program of the National Science Foundation (NSF) has recently recognized and selected the research endeavors by Dr. Q. Jim Chen and his coastal engineering research group at LSU as one of the two 2007 Nuggets from the program.

NSF recognizes notable achievements from its awards each year. It features Dr. Chen’s research in coastal engineering on the agency’s webpage entitled “Wind Wave and Storm Surge Models: Predictions to Avert Future Natural Disasters,” such as Hurricane Katrina.

“The Chen Group was highly insightful in combining the two modeling techniques to provide an improved model for storm surge and wind wave effects,” said the NSF article. “The Chen Group realized a need to simultaneously develop hydraulic and geophysical wave activities and to predict their impact. Combining the two hydrodynamics processes has led to a new modeling technique that will impact storm prediction, city design, and damage mitigation. The Chen Group’s activities are expected to result in increased coastal engineering research and education at LSU, which will allow the region to be better prepared for the future and protect the region.”

Dr. Q. Jim Chen joined the Department of Civil and Environmental Engineering (CEE) at LSU as an associate professor in August 2006. He specializes in coastal engineering, modeling and coastal engineering. The National Science Foundation has listed some of its most prestigious awards in support of state-of-the-art coastal wave and storm surge research that could help protect hurricane-prone Gulf Coasts, especially the Louisiana coast devastated by hurricanes.

In addition to the NSF award, Dr. Chen has secured five other federal grants since he joined LSU last summer, totaling $1.4 million. Among them are a 3-year grant from the U.S. Department of Defense (DoD) aimed at developing new numerical modeling techniques for simulating processes of coastal processes in deltaic environments using high-performance computing technology. Dr. Chen serves as the Principal Investigator of the project and is collaborating with colleagues at LSU Center for Computation and Technology (CCT) to integrate his coastal models with CCT’s computing power.

The long-term goal of the DoD project is to develop and enhance the research and educational capabilities in the area of coastal engineering, including the Department of Civil and Environmental Engineering at LSU while simultaneously educating the U.S. Navy’s research goals in the areas of coastal dynamics.

“The three Pi and Co-Pi CoPs form a very strong team for the proposed study because they have excellent previous experiences in the research topic, and their expertise complements each other nicely,” said one of the anonymous reviewers of another research project led by Dr. Chen and William J. Pietrafesa in the Department of Civil and Environmental Engineering.

Funded by the NOAA Sea Grant Act, the CEE research team is aimed to improve the capability of modeling and surge wave and contamination over wetlands and intrusion potential, provide technical assistance and educational support to the Louisiana Department of Natural Resources (LDNR) Coastal Engineering and a research network to estimate the volume of cohesive sediments potentially carried onshore by a storm surge. The LDNR contributes $50,000 match for the NOAA project led by Dr. Chen.

The success of protecting and restoring Louisiana’s coast requires better capabilities for predicting the response of natural coastal processes to engineering solutions under different forcing agents. Implementation of the Comprehensive Coastal Protection Master Plan calls for a strong partnership between the Coastal Engineering Division at LDNR and the Coastal Engineering Program in the Department of Civil Engineering at Louisiana State University.

Dr. Chen and the coastal engineering group are developing such a partnership that is in line with one of the Louisiana Sea Grant Colleges Program’s goals, which is “to establish the academic research community as a major provider of applied research support for coastal restoration technology and programs.”

Dr. Chen’s research work at the graduate level emphasis on soil-water-structure interaction and probabilistic methodologies, which are fundamental to the engineering solution processes to engineering solutions under different forcing agents.

Mostafa Elseifi

LSU Coastal Engineering and Environmental Engineering is pleased to announce the addition of a new faculty to its Civil Engineering Program. Dr. Mostafa Elseifi joined the department in January 2007 from Bradley University.

Dr. Elseifi is a professor of civil engineering. His research interests include pavement engineering, transportation systems, civil engineering design, environmental engineering, and coastal engineering. He has a Ph.D. degree in engineering from Virginia Polytechnic Institute and State University.

Dr. Elseifi then returned to Cairo in 1990 where he was admitted in the College of Engineering at Cairo University. In 1996, he obtained his Bachelor’s Degree in Civil Engineering. Dr. Elseifi was awarded a distinction degree for his final project in Airport and Pavement Design. He then earned his Master’s and Ph.D. degrees from Bradley Polytechnic Institute and State University.

During his professional career, Dr. Elseifi also worked with the Virginia Tech Transportation Institute (VTTI) as a senior research associate. During that time, he worked closely with the Virginia Department of Transportation, highway contractors, and a variety of pavement-related agencies during the construction of the first pavement instrumentation project in Virginia (The Virginia Smart Road). Dr. Elseifi has worked directly involved with the installation and calibration of one of the world largest networks of pavement instrumentation in this state, the so-called research facility.

Dr. Elseifi’s research expertise focuses on pavement design and evaluation using analytical and numerical techniques. His work in the past includes analysis of methods, fracture behavior of HMA, and modeling of binder and asphalt mixtures performed in the laboratory. Dr. Elseifi has also written widely on the SuperPave Specification Testing System, pavement fatigue test, and indirect tensile test.

Establishing an Intelligent Transportation Systems (ITS) Lab at LTRC

Dr. Ishak and Wolton were awarded a one-year research project in the amount of $50,000 to lay the foundation for establishing a state-of-the-art ITS lab at Louisiana Transportation Research Center (LTRC). This lab would serve to compile, analyze, and report data as part of the Intelligent Transportation System (ITS) effort in Louisiana. The purpose of the lab is to develop and demonstrate procedures that successfully transform existing ITS data into useful information, and then pass the procedures on to agencies in order to apply them on a routine basis. It is also expected that the lab will be utilized to complete analysis functions for the DOTD and to develop, evaluate, and refine procedures for more effectively utilizing the ITS system off-line.

The new lab will serve primarily the metropolitan and state transportation authorities in their efforts to serve the traveling public. The information will allow transportation officials to inform the public of current and expected future traffic condition, and assist in developing operational strategies that make the best use of the transportation infrastructure. The lab will serve as a focal point for academics, researchers, and practitioners in providing access to raw and processed data of traffic flow.

The lab is also anticipated to be a tool to re-tain, recruit, and inspire interest in the field of traffic management for systems for students in Louisiana as well as potential graduate students from outside Louisiana. The short-term measures of success of the lab will be reflected by the capability to stream traffic data in real time from traffic monitoring sites that are connected to the TMIC. Also, the lab will offer technical reporting capabilities regarding traffic issues. The lab would also provide essential and relevant information needed from such data.

Dr. Elseifi’s professional career and his research is simple to explain. He has a strong background in pavements and pavements-related projects in the Middle East. He has an M.Sc. from Helwan University and a Ph.D. from Bradley University in pavement engineering.

Dr. Elseifi’s research and professional career is related to the pavement engineering field. He has extensive knowledge of pavement engineering, design, and rehabilitation. He has authored more than 40 technical and refereed papers published in refereed journals and conference proceedings in the field of pavement systems. He continues to publish in national and international conferences.

Heather Smith

Heather is completing her doctoral work in civil engineering at LSU. Her research focuses on the development and theoretical validation of a testing procedure to estimate HMA viscoelastic properties and advanced viscoelastic constitutive models to simulate the delayed response of HMA materials.

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