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- Find out about our undergraduate and graduate programs
- Find out about our research and service activities
- Find out about our news and events
- and much more!

Contributions to the newsletter are always welcome. If you have news that would be of
 interest to our CEES or your classmates, please send it to us so it can be included in a
 future edition.

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LSU HURRICANE CENTER

MAKING HURRICANE RESEARCH AND EDUCATION
ON THE NATURAL, BUILT, AND HUMAN ENVIRONMENTS

The Department of Civil and Environmental Engineering wants to know where life has taken you. Who are you especially challenging project?

Please complete the following information and permit us to use your photo or your latest project.

Please e-mail: cee@lsu.edu
Civil and Environmental Engineering, LSU, 3418 CEBA Building, Baton Rouge, LA 70803-0405.

CEE ALUMNI INFORMATION

The LSU Hurricane Center is a multidisciplinary center dedicated to research and education on hurricanes and other tropical and their impacts on the natural built and human environments. Faculty from colleges and dozens of departments, centers, and institutes across the campus collaborate on large interdisciplinary projects. Collaborating units include the Southern Regional Climate Center, the Center for Coastal and Estuarine Studies, the Center for Environmental and Estuarine Science, and more than half of the CEE faculty are actively collaborating with the Center on one or more projects.

Since its inception two and a half years ago, the Center has garnered nearly \$3 million in competitive, externally funded research and education programs. Funding sources include the National Science Foundation, Louisiana Board of Regents, Louisiana Sea Grant, and several state and local government agencies (including the Federal Highway Administration). Some of the major research areas are listed below, along with brief biographical sketches of several of the faculty. Additional information is available on the web.

A three-year project funded by the National Science Foundation (NSF) will define and create the new discipline of Hurricane Engineering. It addresses the interaction of hurricanes and coastal and inland engineering systems. Project deliverables include new courses, curricula, and research programs. Levitan is the Project Director and is also leading the structural engineering tasks. Brian Wolke is the transportation engineering component, with Adnan, John Sansalone, John Pardue, and Danny Reible (ChemE). Water resources tasks are being led by Vijay Singh, with Joseph van der Meer and Ulfert. Coastal and Geotechnical tasks are being led by Dariusz and Roger Seals.

The LSU Hurricane Center has created a new undergraduate minor in Disaster Science and Management (DSM). This program combines civil and environmental engineering, coastal and environmental sciences, planning, social sciences, and geographic information science. The DSM Minor is housed in the College of Arts and Sciences but is available to all LSU students. John Pine (EnvE) is teaching the first DSM course this semester, titled

Name: _____
Home Telephone: _____

Position/Title: _____

Business Address: _____

Your News: _____

Don Jones, PE, CSP, received the American Society of Safety Engineers (ASSE) Edgar Mohns Award for his contributions to the safety engineering profession. The ASSE is the oldest and largest safety engineering organization in the world with over 52,000 members.

2002
Transportation Engineering

The Center was recently awarded a grant by the Board of Regents for "Health Threats Due to Hurricanes and Major Flooding Events." This multi-disciplinary faculty from the main campus at the LSU Medical Center in New Orleans. Heerden. Participating CEE faculty include John Pardue, Vijay Singh, Brian Wolshon, Marc Levitan, and Joe Suhayda.

Ivor van Heerden, co-leads a team of dozen researchers to develop a "worst case scenario" for a catastrophic hurricane strike on the city of New Orleans. CEE team members include Joe Suhayda, Vibhas Aravamudan, Marc Levitan, and John Pardue.

Jefferson Parish (western half of New Orleans) is currently conducting a study to assess the survivability of hospital facilities and use as hurricane shelters for special needs patients. The study is part of a larger project to evaluate the impact of hurricanes on the area with hurricane flood and wind modeling. The study is led by Marc Levitan, Divyita Nikhleswala (Mechanical Eng.) and said:

Ivor van Heerden, Joe Suhayda, and Vibhas Aravamudan, Louisiana Sea Grant recently received a \$147,000 grant from the National Science Foundation to study the use of satellite-based remote sensing data to measure extent of flooding and estimate flood depths and damage. (I.R. Wang, Marc Levitan, and John Sansalone). The Hurricane Center was awarded a \$500,000 grant from the Board of Regents (Heerden, Marc Levitan, and John Pardue). Brian Wolshon, Chester Williams, Sherif Ishak, Steve Cai, and Marc Levitan have several hurricane evacuation-related projects with the Army, the American Red Cross to study evacuation routes in southeastern Louisiana.

Marc L. Levitan, Director, LSU Hurricane Center, Professor of Civil and Environmental Engineering, and Charles P. Siess, Jr., Professor of Civil Engineering, are currently studying wind effects on such aspects as assessment and design of hurricane shelter testing and loads on industrial and petrochemical facilities.

Ivor van Heerden, Deputy Director, LSU Hurricane Center, is currently a Professor (Research) CEE with expertise in geology, marine and coastal engineering. He is currently heading the Louisiana coastal communities to develop resource management plans.

Brian Wolshon, Assistant Professor of Civil Engineering, is one of the leading authorities in the country on transportation engineering issues surrounding hurricane evacuation such as design and operation of emergency evacuation routes and evacuations. The research program is currently funded by the Louisiana Department of Transportation and Infrastructure and emergency management agencies.

Joe Suhayda, Director, Louisiana Water Resources Institute, is currently a Professor of Environmental Engineering. He has done storm surge modeling for the past 20 years. His work is featured in the October issue of the journal "Drowning New Orleans."

Transportation Engineering provinces represent public, private, and academic sectors of the transportation industry since its initiation as a biennial event in 1993, this year's two and a half-day conference was a successful conference yet.

Director, Joe Polak, credits the conference's success to the ongoing networking effort between IADOT, ITRC staff, and friends in the entire transportation community.

The conference provides a forum for transportation professionals to relate innovative solutions to real world problems. The 42 technical sessions were held in the afternoon and evening hours, which was attractive to engineering attendees.

The conference was well attended by university students and professionals. The list of attendees included 16 technical sessions made by 24 ITRC members and 16 technical sessions made by 24 ITRC members and 16 technical sessions made by 24 ITRC members.

Special sessions consisted of professional development hours, which was attractive to engineering attendees.

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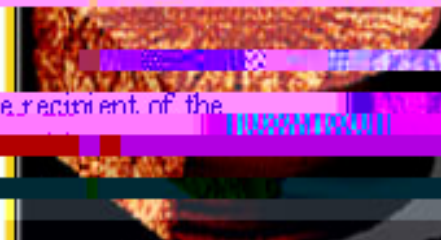
At the first meeting of the fall semester over 100 sessions were held. This was the first time for the 2002-2003 year. The conference was held at the Louisiana State University. Environmental Engineering students. Continue on page 10.

Dr. Marc Levitan (CEE and LSU Hurricane Center) was invited to serve on the Scientific Advisory Committee for the European and African ... July 2005.

Dr. Vijay Singh has been selected by the Environment ... as the recipient of the ... exceptional research contributions related to hydrodynamic modeling ... sediment transport in upland watersheds, analysis and modeling of surface and subsurface water transport in semi arid and anu

Dr. Khatib Nikiti of CEE is serving as the project scientist ... experiments called Mechanics of Granular Materials (MGM) sponsored by ... the NASA Space Shuttle. MGM is a collaborative effort with Professor ... missions in 1990 and 1998 and planning for another ... NASA headquarters as one of its top ... events ... in the undergraduate program in ... in 1977. ... by Elizabeth S. Jewell ... Endowed Pr ... ated ... associate professor, has been ... also chaired a ... The conference was ...

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- 1) A cross section of a sand specimen analyzed using computed tomography
- 2) NASA/Artemis JPL experiment on granular materials using a laser

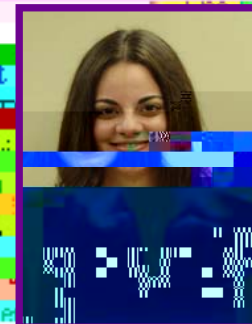
Research Grants

Trautwein, S. (PI), Alshibli, K. (Co-PI), and ... "Rapid Determination of Field Density and Moisture Content" Department of Defense SBIR Program, \$110,000.
Alshibli, K. (PI) "Microfocus Real Time Radiography: A Potential Technology to Study Frictional Properties of Geomaterials", Louisiana DOTD: ... \$40,043.
Alshibli, K. (PI), "Computed Tomography: A Potential Technology to Understand Frictional Properties of Granular Materials", NASA/ Marshall Space Flight Center: Graduate Student Researchers Program (GSRP), \$24,000.

Dr. Marc Levitan "Bioterrorism: Chemical Hazards ... For Hurricanes Flood Within the Large System of New Orleans - GIS Analysis of Oil Spill and Public Health Concerns" Louisiana Oil Spill Research and Development Program, \$40,043.

Dr. Marc Levitan, Dr. Linbing Wang "Impacts for Improved Emergency Response and Recovery", Louisiana Sea Grant, \$174,000.

NASA/ Marshall Space Flight Center (MSFC) has selected Beatriz Nova as a 2002 Graduate Student Researcher Program (GSRP) Fellow. The program will support the research of Dr. Alshibli. She will conduct research on her thesis research at MSFC utilizing the ... shear and in ... remain irregular mate



NSF Research Awards

Dr. R. Richard Avent, Mr. Andrew S. C. v. Anisurrahman, Jr. Professor of Engineering, Dr. [redacted] professor and Dr. Dingang Wang (CEE), assistant professor, in collaboration with [redacted] LSU, University of [redacted] \$214,430 for award work in work titled, "Fracture Properties of [redacted]"

Dr. Sheriff [redacted] assistant professor, received a \$100,000 NSF Research Award under [redacted] Systems for Surface Trajectory [redacted] his research is titled "Exploration of [redacted] Performance Measurements Using [redacted] and texture characterization of [redacted] Traffic Control Maps.

Dr. [redacted] assistant professor, received a [redacted] NSF Research Award under [redacted] 590. His research is titled "Collaborative [redacted] and Modeling of [redacted] submitted a collaborative [redacted] John H. [redacted]"

Dr. [redacted] assistant professor, and co-principal investigator of [redacted] (physics) at Ham (CAMD), have been awarded [redacted] Acquisition of a [redacted] X-ray microtomography [redacted] Their award totaled \$130,000.