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# Civil and Environmental Engineering

## Message from the Chair

*Dr. George Z. Voyiadjis*

I am delighted to report to you through this newsletter some recent highlights from the Department of Civil and Environmental Engineering (CEE).

We have two major challenges at this juncture. First, and most important, to successfully complete the ABET accreditation process. Second, is to over-come budget constraints. The ABET process requires that we are engaged in the continual improvement of our undergraduate programs in civil engineering and environmental engineering and provide documentation that a process is in place to ensure such a goal is achieved. The budget requires that we more actively seek to supplement University and traditional research grant income sources.



Our department undergoes a continuous process of re-evaluation that leads to development and improvement of its Undergraduate Curricula. Changes may require eliminating, modifying, adding or combining courses. Changing curricula to address advances in technologies takes place in an environment which recognizes that a significant number of students who enroll as freshman do not graduate as engineers, which represents a loss of future problem solvers for society. As we develop our curricula, we are cognizant of our mission of producing future leaders who are adequately prepared at their first job and can creatively apply thereafter their basic knowledge. An important aspect of the whole curriculum review effort is to make the use of information technology an integral part of the teaching and learning processes. As the computer provides added capability in the hands of the students, we should effectively exploit it in their learning process. The curriculum review process involves reexamining the tight compartments that have slowly grown within civil and environmental engineering *as well as within* other engineering branches. We need to carefully and continually assess what we want our graduates to know at the time of graduation and also at the end of each course.

The departmental advisory committee consisting of stalwarts from Government and Industry (a number of them are LSU alumni) is asked to play an advisory ro

*Each issue will feature the activities of a research group in the department.*

## **Activities of the Environmental Engineering Faculty**

The Environmental Engineering faculty is actively engaged in research activities with a local, regional and national focus. The research enterprise within the Environmental group supports nearly 50 people including graduate students, post-doctoral associates and support personnel. The research effort attracts several million dollars of external funding annually, much of it repeat business from satisfied sponsors. Sponsors include national entities such as the Department of Defense, Environmental Protection Agency and the National Sea Grant. Environmental engineering researchers are also addressing local and regional problems for entities such as East Baton Rouge Parish, the Louisiana Department of Environmental Quality and the Baton Rouge Parks Commission. Thu 10.98

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## *New Faces in Civil and Environmental Engineering*

### *Welcome:*

**Dr. Steve Cai, P.E., Ph.D.**, University of Maryland, as an Assistant Professor specializing in structural engineering

**Dr. Suresh Moorthy, Ph.D.**, Ohio State University, as an Assistant Professor specializing in computational mechanics and modeling of material behavior.

**Dr. Sherif Ishak, Ph.D.**, University of Central Florida, as an Assistant Professor specializing in transportation engineering.



Stormwater Drainage, GRAIE, Lyon, France, June 2001 – Sansalone, presenter.

**Dr. Louay Mohammad** developed and conducted twelve Superpave Mix design training classes between January 2001 and April 2001. A total of 245 participants attended these courses representing DOTD, contractors, materials suppliers and consulting engineers.

**Dr. Louay Mohammad,** Huang, B., Cea, M., “*Rutting Measurements of HMA Mixtures with the Asphalt Pavement Analyzer.*” Presented at the 2<sup>nd</sup> International Symposium on Maintenance and Rehabilitation of Pavements and Technological Control, Auburn, Alabama, July 29-August 1, 2001.

**Dr. Louay Mohammad.,** “*The Application of Intrusion Technology in Flexile Pavement Design.*” Presented at the Cone Penetration Testing Technology Seminar, Baton Rouge, LA March 26-27, 2001, Alexandria, LA, March 28, 29, 2001. (Invited Speaker).

**Dr. J. B. Metcalf** was invited to present the opening paper “*Applications of Accelerated Load Testing – a Global View*” at the meeting of COST 347 at the German Road Transport Research Center in June 2001.

***International Sessions Chaired***

**Dr. John Sansalone,** Session Chair, “*Storm Water Databases and Applications*”, Session at the 4<sup>th</sup> International Conference on Innovative Technologies in Urban Storm Drainage, GRAIE, Lyon, France, June 2001.

**Dr. Louay Mohammad,** Chair of Technical Session, “AR-HMA Mixture Properties,” Asphalt Rubber 2000 Conference,

# Undergraduate Programs

*Roger K. Seals, Coordinator  
Undergraduate Programs*

The undergraduate programs in civil engineering and environmental engineering are undergoing extensive assessment and evaluation in preparation for their accreditation visits by teams from the Accreditation Board for Engineering and Technology (ABET) in Fall 2003. Drs. John Metcalf and W. David Constant are providing leadership for these activities in civil engineering and environmental engineering, respectively. The Department has adopted a continual improvement model to guide the assessment and evaluation efforts that encompass: establishment of program education goals and student outcome objectives consistent with the ABET accreditation criteria; assessment of the performance of the program and the students; evaluation of the assessment data; and identification and implementation of needed improvements in the program. The concept is to “close the loop” that starts with goals and objectives and ends with the implementation of needed improvements.

A vital element of this process is to involve the professional community at all stages of the process. To this end, the Department has organized the Civil Engineering and Environmental Engineering Program Advisory Committees (CPAC and EPAC, respectively). To provide an appropriate cross section of the respective disciplines, the members of these committees have been drawn from consulting firms, public agencies, and industry. Individuals serving on these committees are listed below:

**CPAC:**

Lane Grigsby, Chairman  
Cajun Constructors, Inc.

Blaise Carriere, P.E., Deputy Secretary, LA Dept.  
of Transportation and Development

Michael N. Dooley, P.E., Vice President, Sigma  
Consulting Group, Inc.

Robert L. Cangelosi, Jr., P.E.  
Site Development Manager  
SJB Group, Inc.

Christopher P. Knotts, P.E.  
Louisiana Department of Natural Resources,  
Coastal Restoration Division

Gordon P. Boutwell, Ph.D., P.E., President  
Soil Testing Engineers, Inc.

**EPAC:**

Laura T. Morrow, P.E., Supervisor  
Environmental Planning Section



## ***Getting Started with ASCE in the New Semester***

Welcome back Students and Faculty. We hope you had a great summer break. The American Society for Civil Engineers (ASCE) is an organization in which the students and faculty can network and socialize. Students are given the opportunity to meet with professional engineers and engineering companies who speak at the meetings. Our meetings are held every other Thursday at 6:00 pm. Students are made aware of job opportunities, internships, and co-ops in the Civil Engineering field. ASCE encourages its members to participate in a number of activities throughout the year such as the Concrete Canoe, Steel Bridge Design, and intramural sports. The meetings are also a great way for the faculty to get feedback from the students about classes, class schedules, curriculum and interests. As always, food and drinks will be served at every meeting.

The new officers for the year are President-Melanie Lestelle, Vice President-Kathryn Rhea, Secretary-Lisa Rodriguez, Treasurer-Denise Authement, Publicity Chair-Adrienne Breaux, Intramural Sports Chair-Geoffrey Wilson, Concrete Canoe Co-Chairs-Denise Authement and Keith Hoffman, and Steel Bridge Chair-Gerard Doyle. Student membership dues are \$35, which includes an ASCE T-shirt. Also, once you have paid student chapter dues, the national chapter membership is free. You can register for the National Chapter of ASCE on-line at [www.ASCE.org](http://www.ASCE.org). The student chapter's website can be found by using the student organization's link on the Civil Engineering department's website which is [www.ce.lsu.edu](http://www.ce.lsu.edu). Click on Student organizations and then ASCE. Events during the fall semester include ASCE tailgate party on October 27 after the fundamentals exam and before the LSU vs. Ole Miss game. In conjunction with the football season, ASCE will have an intramural flag football team so be sure to sign up at the first meeting.

This year Southern University will host the ASCE Deep South Regional Conference. A fundraiser may be necessary to help with some of the expenses of the event. Also, ASCE is always looking for sponsors and guest speakers. To contact us, send an e-mail to Melanie Lestelle at [mlestel@lsu.edu](mailto:mlestel@lsu.edu).

We look forward to welcoming new members and seeing all the returning members at our upcoming meetings!

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

Tel: (225) 578-8442

Fax: (225) 578-4945

*Please contact Dr. George Z. Voyiadjis for more details.*

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# CIVIL AND ENVIRONMENTAL ENGINEERING DEPARTMENTAL CAMPAIGN

The Department of Civil and Environmental Engineering is continuing a fundraising campaign to enrich and enhance programs in the department. Your donation will enhance the Departmental Enhancement Fund supporting new initiatives so that we may continue to produce top-quality engineers.

Our goal is to build an endowment of \$400, 000 and an annual \$50,000 supplement to support the purchase of new lab equipment, computers and software, support of students, and support of faculty activities at professional meetings and conferences.

Any amount will be greatly appreciated; however, donors giving \$200 a year for five or more years or over \$1000 initially will receive special recognition in our departmental newsletter and on the Departmental Enhancement Fund plaque displayed in the department. Company matching funds will also be acknowledged. Please consider the CEE department this year in your annual giving.

***DONOR INFORMATION:***

(please check)

\$10,000 or more

\$5,000 to \$9,999

\$1,000 to \$4,999

\$500 or more

\$200 to \$499

Less than \$200

I pledge \$ \_\_\_\_\_ per year for the next \_\_\_\_\_ years to the CEE Departmental Enhancement Fund for a total of \$ \_\_\_\_\_.

*Please make your checks payable to the "CEE Enhancement Fund"*

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Don't forget to check out the Department of