CAEE helps New Orleans plan for the future after devastation of Hurricane Katrina
Our profession plays a crucial role in sustaining our quality of life. Unfortunately, the importance of our role often is not widely appreciated until disaster strikes. Last year’s hurricane season is certainly an excellent example. I am proud to report that many of our alumni and faculty have been involved in the recovery effort for the coastal communities and associated industries affected by these natural disasters. They are at the forefront in developing creative solutions to provide greater protection in the future. One example of their efforts is highlighted in this edition of our newsletter. Recent events also illustrate the importance of CAEE’s goals: to educate the engineers and to develop the knowledge needed to creatively meet the challenges of the future. In this regard, our faculty continue to be honored for their teaching and research, our students are highly successful in receiving awards, and employers enthusiastically recruit our graduates. The Department was again recognized this academic year by U.S. News and World Report. The graduate programs in Civil and Environmental and Water Resources Engineering were ranked 4th and 2nd in the nation, respectively. Our undergraduate program in Civil Engineering was ranked 4th, as was our Environmental Engineering specialty area. The excellence of our programs would be impossible without the generosity of our many donors who we are pleased to acknowledge in this newsletter. Our Centennial Campaign is on target for a successful completion next summer. If you have not done so yet, I invite you to join the large group of alumni, companies, foundations, and friends who have invested in the future excellence of CAEE.

Gerald E. Speitel Jr., Ph.D., P.E.
John J. McKetta Professor in Engineering and Chairman

The Meaning of Your Support

The CAEE Department continues to rely on the generosity of alumni, companies, foundations and other friends for financial gifts that allow us to offer our students a high-caliber education and prepare them to meet the challenges of the future. Your support is integral to maintaining and enhancing our excellence in engineering education and research.

In an effort to show our gratitude, a donor listing is included in this issue. The list represents all gifts made in support of the department since the inception of the CAEE Centennial Campaign on September 1, 2003.

On behalf of our students and faculty, we greatly appreciate your continued support of our work!
CAEE participates in Hurricane Review Panel

Hurricane Katrina was one of the most costly and deadly hurricanes in our nation’s history. The enormous loss of life and property has led to many questions regarding the hurricane protection system in New Orleans and Southeastern Louisiana. In an effort to understand the response to Hurricane Katrina and effectively create a more resilient protection system, two CAEE alumni and two current faculty members are part of a large-scale, multidisciplinary analysis of what went wrong and why.

The ASCE External Review Panel was convened in October 2005 at the direction of Lt. Gen. Carl E. Strock, Chief of Engineers and Commander of the U.S. Army Corps of Engineers. The External Review Panel (ERP) is chaired by University of Texas at Dallas President, David Daniel (BSCE ’72, MSCE ’73, Ph.D. ’80), William Espey, Jr. (BSCE ’60, MSCE ’63, Ph.D. ’65), a hydrology expert, and CAEE geotechnical engineering professor, Robert Gilbert, are panel members as well. The ERP was established to conduct peer review of the work performed by the Interagency Performance Evaluation Task Force (IPET), of which Stephen Wright, another CAEE geotechnical professor, is contributing his knowledge on slope stability.

The panel’s technical overview will include: data collection about the condition of hurricane protection systems, both before and after Katrina; reexamination of project construction and maintenance; analysis of floodwalls, levee performance and pumping stations; numerical modeling characterizing the storm surge; analysis of economic decisions associated with hurricane protection systems; and engineering/operational risk and reliability of the system. A total of four reports, available to the public, will be completed and submitted to the National Research Council (NRC) by June 2006.

Daniel, also a geotechnical engineer, is confident that the panel’s review process will provide credible technical assessments. He believes they will greatly aid the region and the country as a whole in rebuilding the hurricane protection system. “I got involved in the project because I believe that the catastrophic damage and loss of life in New Orleans resulting from Hurricane Katrina represents the biggest engineering-related failure in my lifetime,” says Daniel. “I wanted to understand what happened, contribute to identifying lessons learned, and help the profession to apply those lessons to the improvement of engineering work in the future”.

Since its inception, the panel has toured damaged areas of New Orleans, reviewed documents and been in constant communication with IPET members. So far, the ERP has been impressed with the task force’s in-depth analysis of levee, floodwall and control structure failure.

Espey, the team leader in drainage review, is confident that engineering technology will be improved as a result of the panel’s findings. Chosen for his reputation in the areas of hydrology, drainage and flood control, he states “The (U.S. Army) Corps of Engineers and other agency partners have put forth extensive effort in their attempt to determine what happened and what they could learn in order to further protect New Orleans.”

ERP members agree that in order for their findings to have effectiveness, local agencies and those affected by the hurricane must be engaged and invested in the process of moving forward. The role of civil engineers in initiating this process is paramount. Gilbert, a panel member who is assessing performance reliability and risk management, feels that “we will never be able to eliminate the risk of such a failure in the future. However, we will be able to make failure less likely and the consequences less catastrophic if we take an active role with the local and federal governments in developing a risk-informed approach to protection, land use and emergency response.”

Once the flaws in planning and design of hurricane protection systems are understood, today’s engineers can be leaders in developing better structural safeguards for our cities. For more information on the External Review Panel and its findings, please visit www.asce.org or www.usace.army.mil.
Recent Faculty Achievements

Chandra Bhat was awarded the ASCE James Laurie Prize for innovative contributions to the analysis and design of transportation systems. He has also been named chair of the International Association of Travel Behavior Research. The organization is an international professional association of academics and practitioners.

Ned Burns has been awarded the Arthur R. Anderson Award for his research by the American Concrete Institute. When he was in the U.S. Army, Ned was encouraged by Dr. Arthur Anderson, a pioneer in the field of prestressed concrete.

Richard Corsi received a Distinguished Alumni Award from Humboldt State University in California, where he earned his bachelor’s degree in environmental resources engineering in 1983. He was chosen to receive this award due to his contributions to teaching, research and public outreach in the area of indoor air quality.

Kevin Folliard has been appointed a Visiting Professor at the Swiss Federal Institute of Technology in Lausane, Switzerland for the Spring 2006 semester. He is performing research on calcium aluminate cements and teaching a course on concrete durability.

David Fowler was elected a Fellow of the Architectural Engineering Institute (AEI), the organization’s highest membership grade. Fowler has earned an international reputation for his research with polymer concretes, concrete sealers and intelligent polymer concrete.

Richard Furlong was selected as the 2006 Austin ASCE Civil Engineer of the Year. His award-winning research on composite columns and bridge design led to improvements in design specifications. He has also created numerous design aids for structural engineers.

Randy Machemehl received the S.S. Steinberg Award from the Research and Education Division of the American Road and Transportation Builders Association in recognition of his “outstanding contribution to transportation education.”

Joseph Malina was honored by the Water Environment Association of Texas (WEAT) with the WEAT Lifetime Achievement Award during the Texas Water 2006 Conference in Austin. The award recognizes members who have demonstrated “continual and tireless” contributions to the wastewater treatment industry.

Danny Reible received a President’s Volunteer Service Award for helping to retrain former Soviet defense scientists in environmental science and engineering. He was awarded by the President’s Council on Service and Civic Participation.

Jeffrey Siegel is the recent recipient of the 3M Non-Tenured Faculty Award, an unrestricted research award funded by the 3M Contributions Program. He also received the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) New Investigator Award. These two research awards will fund studies on HVAC systems.

Michael Walton has received an Award for Distinguished Contributions to University Transportation Education and Research from the Council of University Transportation Centers (CUTC) in recognition of his significant and outstanding contributions to university transportation education and research.

Sharon Wood received the Henry L. Kennedy award from the American Concrete Institute “for outstanding technical and administrative contributions to the Institute, particularly as a member of ACI Committee 318, Chair of the ACI Publications Committee, and Member and Chair of the Technical Activities Committee.”
Spring Banquet:
Student Awards and Faculty Recognition

Each spring, the “Annual CAEE Student Banquet” is held and hosted by the students. It provides an opportunity for all to come together in a social atmosphere as a whole to recognize students and faculty. We were also entertained by a skit from the student organizations (ASCE, AEI, Chi Epsilon and Phi Alpha Epsilon). The following awards were presented at the Banquet on March 30, 2006:

**Recognition: Student Accolades**

- **Hongrui Hu** was recognized by the Graduate Engineering Council in the “materials science/engineering” category for his research that numerically models the interaction between slide mass and surrounding fluid.

- **Enrique Dominguez**, CE senior and president of student chapter of Society of Professional Engineers, received a Student Leadership Award in Engineering from the College of Engineering.

- **Rong Luo** won the GAIN Best Poster Award for her poster “Pavement Responses at Asphalt Surface under Measured 3-D Tire-Pavement Contact Stress.”

- **Sungjin Bae** was recognized by the Graduate Engineering Council in the “engineering systems, design management” category for his research, “Deformation Capacity of Concrete Columns.”

- **Chi-Chi Lin** won in the Graduate Engineering Council category for “energy/environmental systems and transport processes,” presenting research about a chemical emission from latex paint.

- **Xiaokun Wang**, doctoral student, won a scholarship from the local chapter of the Women’s Transportation Seminar.

**ASCE Student Chapter Wins 3rd Place in Regional Steel Bridge Competition**

The ASCE Student Chapter qualified for the 2006 national Steel Bridge Competition after winning third place in the Texas-Mexico regional contest. The team qualified in January after their steel bridge won prizes for weight, structural and construction economy. The competition gives students hands-on experience in the process of design and construction, fabrication procedures and working as a team. Bob Gilbert, civil engineering professor, is the team’s Faculty Adviser.

- **ASCE Student Chapter Wins 3rd Place** in Regional Steel Bridge Competition

Members of the Steel Bridge Team (L-R): Flavia Mara Guzman Villarroel, Michael Stonaker, Luciana Takahashi, Mark Trowsdale, Ty Womble, Mike Vitek, Herman Lehman IV, Michael Reyes, Kayode Adewumi, Chris Anspach.

**Recognition: Student Accolades**

- **Richard L. Corsi**, Hudson Matlock Teaching Award and Ervin S. Perry Student Appreciation Award

- **Joseph Fradella**, Outstanding Teaching Assistant/Assistant Instructor Award

- **Kevin Michael Graf**, John A. Focht Academic Excellence Award

- **Casey Shannon Baker**, Werner W. Domberger Academic Excellence Award

- **Elena Enach-Pommer**, CE Student Leadership Award

- **Salome Balderrama**, ARE Student Leadership Award


- **Robert J. Frosch**, Outstanding Young Alumnus Award
Established in 2003, the Outstanding Young Alumnus Award recognizes an alumnus of the Department of Civil, Architectural and Environmental Engineering under the age of 40 who has distinguished him or herself with outstanding service and contributions to the engineering profession.

After completing his BS in Civil Engineering at Tulane University, Robert Frosch entered the structural engineering graduate program at the University of Texas at Austin, where his performance was exceptional. During his studies, he received the highly-competitive NEHRP Graduate Fellowship from the Earthquake Engineering Research Institute in 1994-95. Only one of these awards is given each year.

After completing his graduate degrees, he returned to New Orleans to work as an engineer at the major bridge design firm, Modjeski and Masters. Shortly thereafter, he accepted a position as Associate Professor of Civil Engineering at Purdue University. During his time at Purdue University, he has been recognized for both his teaching and research. He has also received recognition from the American Concrete Institute (ACI) from which he has received the young member award for professional achievement and been named a Fellow. The results of his work have been incorporated into the ACI Building Code.

Robert’s research interests include behavior and design of structural concrete, earthquake engineering, and repair and rehabilitation of structures. Through his professional committee work, he is able to stay knowledgeable of current design practice and routinely provides students with this information in the classroom. In addition, he has conducted pioneering work related to the use of alternate structural reinforcement such as glass and carbon fibers.

Robert is extremely proud of the time he spent at the University of Texas at Austin and attributes his success to the outstanding education and mentorship that he received in this department. “The faculty and staff made me feel at home and part of a family. U.T. provided so much more to me than simply an education.”

Read more about CAEE Outstanding Young Alumni at: http://www.ce.utexas.edu/outstanding.cfm

New Flume Assists Students in Lab

During the spring semester, students were introduced to a new piece of equipment that enhances classroom learning. An open channel flume, installed over winter break, is now a permanent lab tool for students studying hydraulic engineering and ocean engineering. The research quality flume creates waves in a glass tank, the five meter long “test section,” and is used for three-dimensional studies of water flow.

For students in the Hydraulics and Fluids lab, the flume illustrates how fluid flows in an open channel and is utilized to estimate flow rates over weirs. According to Ben Hodges, Assistant Professor of Environmental and Water Resources Engineering, “it creates a live model so that students can see a theory demonstrated and then do the math equations to support it.” The flume’s flow rate and gate can be manipulated so that students can better comprehend theories which can be difficult to imagine mathematically, like hydraulic jump, when water appears to flow uphill.

The flume can also be set up to show students how engineers use weirs, overflow-type dams, to measure flow rate. During this lab, the class records data to estimate flow over the weir using weir and water level measurements.

Seeing a theory proven in a hands-on lab setting helps students better absorb engineering concepts. Equipment like the open channel flume supports such an approach to learning.
The Department of Civil, Architectural and Environmental Engineering thanks the following alumni, friends and corporations for their contributions since the inception of the CAEE Centennial Campaign on September 1, 2003. This represents all gifts made in support of the CAEE Department, through outright giving, Friends of Alec Annual Giving Program, corporate matching or through an estate provision. We are grateful for your support.

Every effort has been made to list donors accurately. If a mistake has been made, please accept our apology and contact us at cecentennial@engr.utexas.edu or (512) 471-6151 so that we may correct your name. Donors from September 1, 2003 to June 1, 2006 are listed alphabetically.
Update: Centennial Campaign

Did you find your name on the donor list?

It is not too late to participate in CAEE’s Centennial Campaign. Join your classmates and colleagues in this very important effort.

Visit: www.ce.utexas.edu/centennial to learn about funding opportunities and to download a Pledge Form.

Make a gift online through the Friends of Alec (don’t forget to designate to CAEE!) at: www.engr.utexas.edu/giving/foa

Questions? Please call Kelsey Evans at 512-471-6151 or by email at kelsey.evans@mail.utexas.edu

CAEE Centennial Campaign Totals

All totals reflect gifts made from 9/1/03 through 6/1/2006.

Total Cash and Pledges: $1,896,825
Total Planned Gifts: $1,625,000
Campaign Total: $3,521,825
Campaign Goal: $5,000,000
Amount needed to goal: $1,478,175
60’s

70’s
Jack Furlong, P.E., BSCE ’74, is proud of the birth of his granddaughter, Caroline Grace Little, born in November 2005. His father, Richard W. Furlong, Professor Emeritus Civil Engineering, has been on the faculty since 1958.

80’s
Jeffrey Moore, MSCE ’89, is the President of Houston-based Doris, Inc. Doris, Inc. specializes in facilities engineering for deepwater oil and gas developments. His daughter, Megan Grace Moore, was born in 2004.

90’s
Ernest Cerda, P.E., BSCE ‘95, has left TxDOT after 12 years and has begun a new phase of his career with the engineering firm of Wilbur Smith Associates as a Design Engineer. He lives in Austin with his wife, Leigh (Sanders) Cerda, BSCE ’94, and his 3-year old daughter, Lara Elizabeth.

Charles Benjamin Farrow (C. Ben Farrow), MSCE ’92, announces the birth of Gabriel Clement Farrow born in November 2005. Gabe is the 2nd son and 4th child of Ben and Julia Farrow. Ben is the Managing Principal of TRC International, LTD. in Brentwood, Tennessee.

Amy (Peevey) Brom, BSARE ’99 and Michael C. Brom (1995 A&M engineering grad) are the proud parents of Zachary Michael Brom (future Longhorn grad) in March 2005.

00’s
Sid Edmonds, BSCE ’04, is a graduate student at the University of Houston, working on his MBA. He is recently engaged to Kyla Schiller, a UT Finance grad.

Pradeep Gulipalli, MSCE ’05, won the Milton Pikarsky Award for an Outstanding M.S. Thesis in Science and Technology. He now works as a consultant for Marketing and Planning Systems in Boston.

Alumni
CAEE alumni go on to varied professions and interesting careers. Faculty, current students, and fellow alumni are always interested in learning about where a UT degree can take a person, and the lives alumni lead after they leave. If you have an update you’d like to share - a career change, promotion, retirement, marriage or baby, please email Laura Klopfenstein at klopfenstein@mail.utexas.edu, or visit our website at www.caee.utexas.edu/alumni.

If you have an update you’d like to share - a career change, promotion, retirement, marriage or baby, please email Laura Klopfenstein at klopfenstein@mail.utexas.edu, or visit our website at www.caee.utexas.edu/alumni.

J. J. Minahan, Jr., BSARE ’75, was appointed Vice President-Business Development and elected as an Officer at Way Engineering Ltd.. The company was recently named Largest Houston-Area Mechanical, Electrical & Plumbing Contractor by *Houston Business Journal.*

Gary Joe Wolff, BSCE ’75, received the Advanced Toastmaster Bronze Award from Toastmasters International. Gary resides in Tokyo, Japan where for the past 12 years he has worked for Nishimatsu Construction and lectured at the School of Science and Technology at Meiji University. He would love to hear from former classmates at garywolf@gol.com.

80’s
Jeffrey Moore, MSCE ’89, is the President of Houston-based Doris, Inc. Doris, Inc. specializes in facilities engineering for deepwater oil and gas developments. His daughter, Megan Grace Moore, was born in 2004.

Jim Williams, Ph.D. ’86, endowed a new scholarship at Lamar University in memory of his wife, Susan M. Morgan, who passed away unexpectedly in 2001. Susan received her BSCE in 1979 from Lamar. The scholarship is for undergraduate civil engineering students who are active in ASCE and/or Chi Epsilon.

00’s
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Pradeep Gulipalli, MSCE ’05, won the Milton Pikarsky Award for an Outstanding M.S. Thesis in Science and Technology. He now works as a consultant for Marketing and Planning Systems in Boston.

Adrian Sepulveda, BSAE ’05, and Natalie (Nichols) Patroni, BSAE ’05, catch up with former classmates at the Dallas Area Alumni Reception on May 3, 2006.
Save the Date!
CAEE Alumni Banquet
&
Academy of Distinguished Alumni Induction Ceremony
October 13th, 2006

The University of Texas at Austin
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Austin, TX 78712-0273

For more on the Department of Civil, Architectural & Environmental Engineering, or for information on ways to get involved with UT CAEE, please contact Laura Klopfenstein at 512-471-1279, or by email at: klopfenstein@mail.utexas.edu
www.caee.utexas.edu/