

UT CAEE

SUMMER 2008

civil, architectural & environmental engineering newsletter

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Architectural Engineering

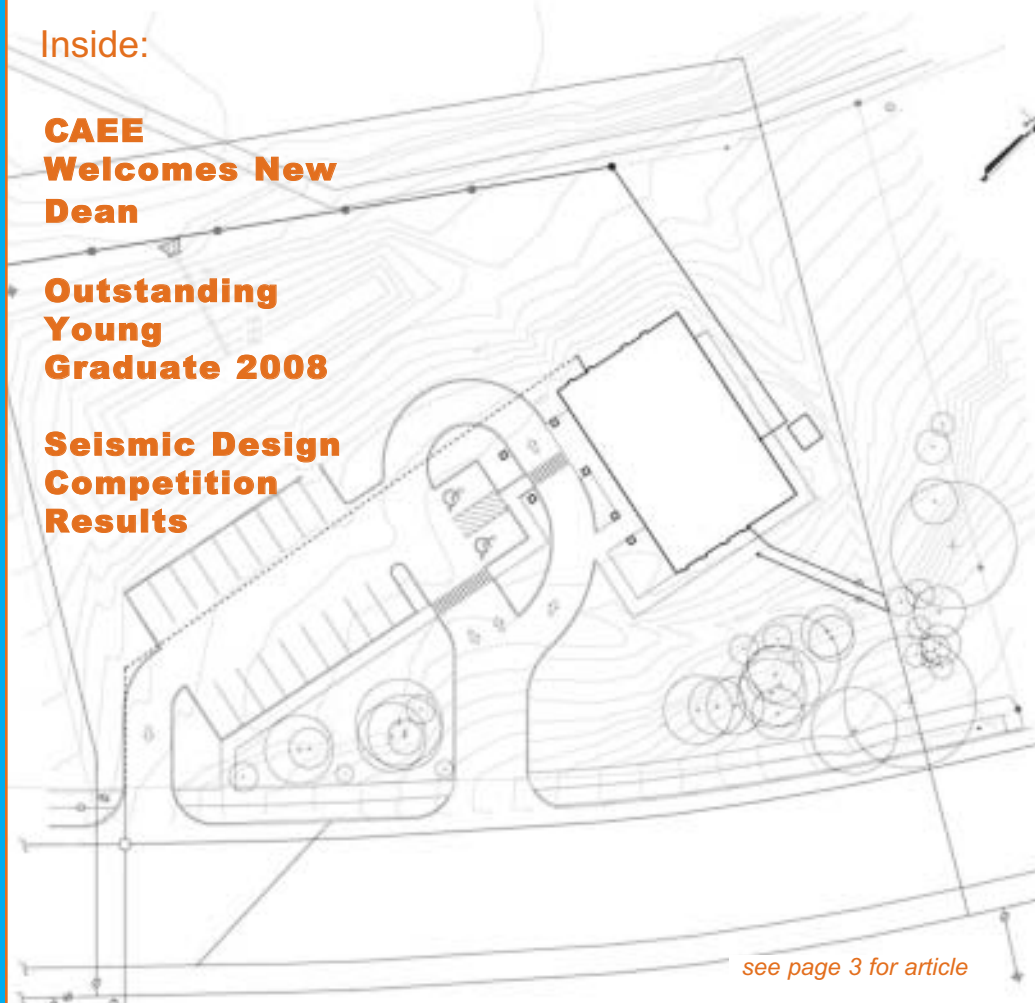
Connecting Students & Alumni

Inside:

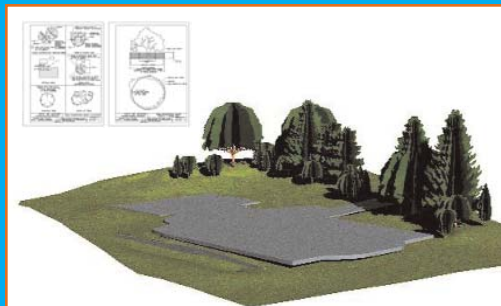
**CAEE
Welcomes New
Dean**

**Outstanding
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Graduate 2008**

**Seismic Design
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Moving Forward: A letter from Chair Gerald Speitel



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

In this issue of UT CAEE, we'd like to applaud the efforts of our students and faculty and to share some of their recent achievements with you. Please take a moment to read about them. As in the past, the accomplishments of our students and faculty have received national attention: our graduate programs in Civil Engineering and Environmental Engineering were both ranked 4th nationally in the annual *U.S. News* rankings while the undergraduate program in Civil Engineering was ranked 6th nationally. Although Architectural Engineering programs are not ranked by *U.S. News*, I feel confident that UT's program would be ranked among the best in the nation.

As noted below, our lunchtime alumni receptions and seminars in Houston, Dallas, and Austin have been a great success (with another to follow in San Antonio in August). These are great opportunities for alumni networking and professional development, as well as for staying connected to UT. If you were unable to participate this year, I encourage you to do so next year. Also, please mark your calendars for our annual fall Alumni Banquet in Austin on Friday, November 7. We regularly have well over 100 attendees - let's top 200 in 2008! More details will be sent to you in early fall.

I am also pleased to report that the next Dean of the Cockrell School of Engineering is a civil engineer. Greg Fenves, who started his academic career at UT, will be joining us on September 1, 2008 from the University of California, Berkeley. Please see the article later in the newsletter for more details about Dr. Fenves' interests and accomplishments. We welcome him as the new leader of the School and also as a CAEE faculty member.

As part of the transition of leadership in the Dean's Office, I will be stepping down as Chair on August 31, 2008 to become the Associate Dean for Academic Affairs. It has been a privilege and certainly a highlight of my engineering career, to serve as Chair of this great department over the past seven years. One of my lasting memories will be the opportunity I had to meet many of you. I gained a fuller appreciation for the strength of your support of the department and for the great things our alumni are accomplishing throughout Texas, the nation, and the world. Working together, the faculty, students, and alumni continued the tradition of excellence that this department has long been known for. Support from our alumni and friends is a key ingredient of our success, and I look forward to a continuation of that in the future as CAEE strives to meet the challenges of the 21st Century.

Gerald E. Speitel Jr., Ph.D., P.E.
John. J. McKetta Professor in Engineering and Chairman
speitel@mail.utexas.edu



CAEE Alumni Outreach Update

For the past two years, UT CAEE has offered our Texas graduates the opportunity to earn credit toward maintaining P.E. licensure. Alumni from Dallas, Houston and Austin were invited to attend area ethics presentations during lunchtime where they received a one-hour professional development credit. Presentations were given by a faculty member who discussed engineering failures and the professional/ethical issues they have encountered.



Structural Engineering Professor Michael Engelhardt speaks before Dallas area alumni at multidisciplinary engineering firm, Chiang, Patel & Yerby, Inc. The presentation, "Building and Structural Fire Safety: Future Directions and Needs", focused on issues and problems related to building and fire safety and the need for engineered structural fire protection.

Response to this outreach effort has been extremely positive. Alumni appreciate this beneficial service and enjoy reconnecting with the department and each other. The ethics presentations, as well as many other programs and activities, are made possible by gifts to CAEE through the Friends of Alec Annual Giving Program. To participate in this year's giving effort, please consider making a gift by filling out the pledge card on the back page.

Spring Banquet:

Celebrating Student Leaders and Faculty



Each spring, the annual CAEE Spring Banquet is held to recognize student leaders and faculty for their outstanding accomplishments. Members of the External Advisory Committee also attend and several engineering firms sponsor the banquet, sending representatives so that students can become better acquainted with the various career paths that await them.



Student Awards

Renee Michaelleen Alsup, *John A. Focht Academic Excellence Award*

Stephen Wroe Foster, *Werner W. Dornberger Academic Excellence Award*

Christopher Matamoros, *CE Leadership Award*

Matthew Homer, *ARE Leadership Award*

Faculty Awards

Spyros Kinnas, *Ervin S. Perry Student Appreciation Award*

John Tassoulas, *Department Teaching Award*

John Hand, *Outstanding Teaching Assistant/Assistant Instructor Award*

Student Accolades

Alison Conway, a Ph.D. student in transportation engineering, was selected to participate in the 2008 Eno Leadership Development Conference by the Board of Regents of the Eno Transportation Foundation. The conference selects 20 graduate students from around the nation to take part in transportation policy development and implementation. Students will meet with federal officials as well as leaders of business and non-profit organizations at the conference.

The **UT Austin ASCE Steel Bridge Team** finished 1st place overall at this year's Texas-Mexico Region in Beaumont, Texas. The team took 1st in every category: Construction time, Construction economy, Lightness / Weight, Stiffness, and Structural Efficiency. In the 17 years of the regional competition, this is the first time that UT Austin has taken 1st overall. Congratulations to Hol Gaskill, Charles Hammond, Alan Kreisa, Doug Steimle, Leslie Winans, Co-Captains Josh Mouras and Ty Womble, and faculty advisor, Bob Gilbert.

Brent Stephens and **Michael Waring**, environmental and water resources engineering graduate students, both received \$10,000 research grants from the American Society of Heating, Refrigerating and Air-Conditioning Engineers. Stephens will conduct a study of how climatic conditions affect air conditioning energy consumption in residential and light commercial buildings. Waring will study how interior surfaces in buildings impact particle generation due to indoor ozone chemistry.

Ty Womble received the 2008 ASCE Region 6 Student Leadership Award in recognition of his achievement and service to ASCE.

Eric Hersh and **Brigit Ashfar**, UT CAEE graduate students, recently received water-related research grants funded by the Texas Water Resource Institute (TWRI). The students were awarded up to \$5,000 to begin, expand or extend water-related research projects.

Cockrell School of Engineering Outstanding Young Graduate 2008 Shay Ralls Roalson, MS EWRE 1999



Shay Ralls Roalson
(MS EWRE '99)

Shay Roalson has made meaningful contributions to water resources engineering both in and outside of the work place. Through her graduate research and career, she has acquired 15 years of experience planning and designing water and wastewater pumping, conveyance and treatment facilities. She has also been an active leader in several professional organizations throughout Texas and in the far-reaching community.

While earning her M.S. degree in Environmental and Water Resources Engineering from UT Austin, Roalson worked on a project funded by the U.S. Environmental Protection Agency studying enhanced softening for water treatment. At this time, she developed complex laboratory procedures and obtained first-rate data, which was eventually published in the *Journal of the American Water Works Association*.

Upon completing her degree at UT, she returned to Camp, Dresser & McKee, the firm for which she worked after earning a bachelor's degree in engineering from Vanderbilt University.

In 2002, Roalson joined the Austin Public Works group of Turner Collie & Braden as senior project manager, where she oversaw municipal water and wastewater design and construction. The firm named her Engineer of the Year in 2003. This June, she began a new role as practice group leader for the Natural Resources and Planning group, which provides services in the areas of stormwater, groundwater, floodplain, planning and environmental assessments.

Roalson also helped found the Capital Area Chapter of the Texas Section of the American Water Works Association (AWWA) and was recent chair of the Texas Section of AWWA. In the latter position, she provided leadership for thousands of professionals who are engaged in the treatment, distribution and management of Texas' water resources.

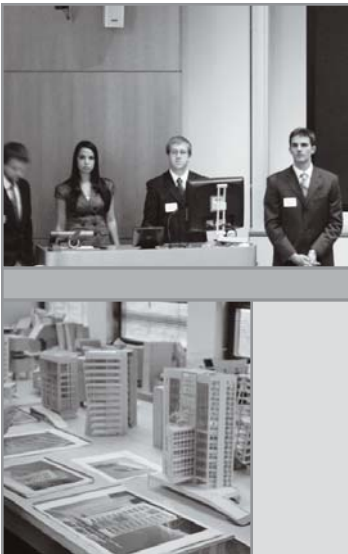
She has also volunteered her technical know-how to improve the water facilities in a small border town in Chihuahua, Mexico. The work improved the town's well, storage tank and chlorination system, and replaced distribution lines to individual homes. Local townspeople and volunteers from the international aid organization, Water for People, and University Presbyterian Church (UPC), of which Roalson is a member, assisted. The project was funded by a grant from UPC and was facilitated by the Texas Section of AWWA.

Roalson and her husband Brad (BS Finance '89), have two sons, Cooper, 3, and Malcolm, 1.



Completed water tank in Manuel Benavides, Chihuahua, Mexico

Architectural Engineering: Connecting Students & Alumni

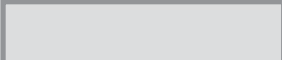
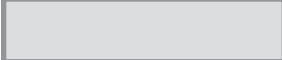


Each semester, junior and senior Architectural Engineering students invite alumni and industry representatives to view and comment upon their work. Students in the Integrated Design capstone course make presentations during a symposium and through a separate architectural design course, students exhibit their projects in an open house. Both events provide students with the opportunity to apply advanced engineering concepts and to gain insight from professionals, an important component of the students' learning experience.

To prepare for the Integrated Design symposium, instructors Kirby Kuntz and John Rickard teach students to design low-rise buildings, including structural and environmental systems and preparation of contract documents. Students learn to apply engineering design principles with respect to real world building design problems. For the symposium, teams present their design concepts and engineering solutions to an audience of alumni, faculty and their peers.

For the open house, students from the Intro to Design courses create drawings and 3D models that combine structural design, mechanical design, sustainable strategies and architectural design in their creative solutions. Instructor Gregory Brooks has prepared the students for this project by teaching them how building systems and architectural goals need to be developed together in the early stages of a building design. *If you wish to participate next spring, please contact Laura Klopfenstein at 512-471-1279.*

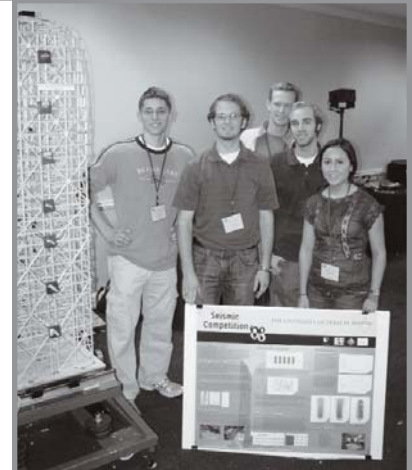
CAEE Students Place Second in Seismic Design Competition



Earlier this year, CAEE Students took second place in the 5th Annual Undergraduate Seismic Design Competition at the Earthquake Engineering Research Institute's (EERI) Annual Meeting in New Orleans. Seventeen teams participated in the competition, and this is the second year that UT CAEE has competed in the competition, which is largely dominated by California schools.

For the competition, students designed and constructed a balsa wood model of a high-rise office building that was subjected to multiple earthquake ground motions via a shaking table. The goal of the competition was to design and build structures that maximize net revenue. Teams were judged based on the building's seismic performance, architectural design, structural innovation, financial return for the client over the life of the structure, and their group presentation.

Students received guidance from graduate students Albert Kottke, Joshua Mouras, Shiv Ravichandran and from faculty members Mike Engelhardt, Wassim Ghannoum, Sharon Wood, and Ellen Rathje, EERI faculty advisor.



Team members that traveled to the competition (L-R): James Kleineck, Martin Scales, Ty Womble, Matt Homer and Ariana Alvear. Other team members who participated are Lynna Lotrakul, Michelle Wilkinson, Eleanor Reynolds, Mark Trowsdale, and Philip Goertz.

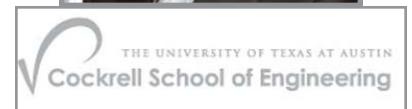
CAEE Welcomes New Dean, Renowned Structural Engineer

Gregory L. Fenves, T.Y. and Margaret Lin Professor of Engineering at the University of California, Berkeley, has been appointed dean of the Cockrell School of Engineering. He began his academic career as an assistant professor in the Department of Civil Engineering at the University of Texas in 1984. Fenves joined the faculty at UC Berkeley in 1988 and served as the assistant director for lifeline programs at the Pacific Earthquake Engineering Research Center from 1997 to 2002 and chair of the Department of Civil and Environmental Engineering from 2002 to 2007.

His areas of research include earthquake engineering, structural dynamics, structural health monitoring, and development of computer-based methods for engineering analysis. Fenves was the lead creator of OpenSees, an object-oriented software

framework for structural and geotechnical systems that is used around the world for earthquake engineering applications. Current research activities include simulating the impacts of large earthquakes on buildings, transportation systems, and underground civil infrastructure in urban areas. He also conducts research in applications of wireless sensor networks for monitoring and assessment of structures.

Fenves has been recognized by the American Society of Civil Engineers with the Raymond C. Reese Research Prize in 1989, the Moisseiff Award in 1993 and the Walter L. Huber Award in 1995. He received a Presidential Young Investigator Award from the National Science Foundation in 1987. Fenves will join the Cockrell School of Engineering on September 1, 2008.



Gregory L. Fenves, has been appointed dean of the Cockrell School of Engineering

Recent Faculty Achievements



Chandra Bhat, Adnan Abou-Ayyash Centennial Professor in Transportation Engineering, received the Wilbur S. Smith Distinguished Transportation Educator Award from the Institute of Transportation Engineers for his “outstanding contribution to the transportation profession by relating academic studies to the actual practice of transportation.”



(L-R): Jack Breen, Keith Thompson and Jim Jirsa's paper recently received a notable ACI annual award.

John E. Breen, the Nasser I. Al Rashid Chair in Civil Engineering, received the Chester Paul Siess Award for Excellence in Structural

Research from the ACI for co-authoring a paper with fellow award recipients, Jim Jirsa and M. Keith Thompson (MSCE 1998, Ph.D. 2002).

Kevin Foliard, associate professor of civil engineering, has been named chair of the American Concrete Institute committee on concrete durability. He has also been appointed to be a member of the general concrete and construction subcommittee, which develops materials and durability-related guidance for the Structural Concrete Building Code.

Hillary Hart, graduate and undergraduate engineering communication Distinguished Lecturer and Director of the Braden Program for Excellence in Technical Communication, was named fellow by the Society for Technical Communication for her significant contributions to the technical communication profession.

Jim Jirsa is the recipient of an Honorary Membership in ACI “for his outstanding accomplishments in the research areas of design, behavior, and durability of concrete structures including repair and strengthening of structures, and for his leadership in improving ACI’s international relationships.” He also received the Chester Paul Siess Award for Excellence in Structural Research from the ACI.

Thomas Kennedy, emeritus professor of civil engineering, was honored with the Lifetime Achievement Award from the

Association of Modified Asphalt Producers (AMAP) and is the first member of the organization’s newly established Paving Industry Hall of Fame.

Kara Kockelman, associate professor of civil engineering, received the Woman of the Year Award from the Texas chapter of the Women’s Transportation Seminar. This award honors a leader in the field of transportation who has advanced the reputation and credibility of women in the field.



Kara Kockelman (L) receives the Woman of the Year 2008 Award.

Randy Machemehl has been selected to receive the 2008 Wilbur S. Smith Award from the Transportation and Development Institute of the American Society of Civil Engineers. This award recognizes a person who has been an asset to the transportation profession by relating academic studies to the actual practice of transportation.

William O’Brien was awarded the FIATECH CETI award in the “Technology and Knowledge Enabled Workforce” category for their research project. O’Brien was also awarded an “Honorable Mention” in the “Early Career Researcher” category for his ongoing research in advancing information technologies and their use on construction projects.

Kenneth H. Stokoe, II, civil engineering professor, received the 2008 Frank Frischknecht Leadership Award for his contributions to near-surface geophysics. The honor is given jointly by the Environmental and Engineering Geophysics Society and the Society of Exploration Geophysicists.

Jorge G. Zornberg, associate professor of Civil, Architectural and Environmental Engineering received the Achievement Award from the Mexican Chapter of the International Geosynthetics Society in recognition for his leadership role in GeoAmericas 2008.

Joseph Yura, emeritus professor of civil engineering, has been selected to receive the prestigious Offshore Technology Conference Hall of Fame award. He receives this award in recognition of his outstanding work published in OTC Paper 3690 - Ultimate Capacity Equations for Tubular Joints.

Alumni Updates

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/alum

60's

H. Thomas Kornegay (BS ArchE 1964) was selected as Houston's 2008 Engineer of the Year. He has been the Executive Director of the Port of Houston Authority since 1992. He has also served on the board of directors of the World Trade Division of the Greater Houston Partnership and was a member of the CAEE Visiting Committee from 1997-2003.



Tom Kornegay (BSArchE '64)

Joe M. Baker (BSCE '62), Principal and President of Baker-Aicklen & Associates, Inc., was recently named Citizen of the Year by the Round Rock Chamber of Commerce for his philanthropic pursuits, as well as his role in leading Baker-Aicklen's positive economic impacts on the surrounding community.

80's

Khaled Kakhaleh (MSCE '85, Ph.D. '94) has assumed the post of Vice President of the Royal Scientific Society (RSS) of Jordan, the largest research institution and technical service provider in Jordan. He is heavily involved in initiatives to convert RSS into the first science park in Jordan, The El Hassan Science City, focusing on R&D and entrepreneurship to create an engine for economic development.



Khaled Kakhaleh (MSCE '85, Ph.D. '94)

Waheed Uddin (PhD '84) professor of civil engineering at the University of Mississippi, was presented the inaugural 2007 Epps/Dart Award For Excellence in Teaching by the Deep South Section of the Institute of Transportation Engineers (ITE). The honor recognizes Uddin's many years of outstanding instruction and leadership of UM's ITE student chapter.

90's

Norbert J. Delatte (Ph.D. 1996) was awarded ACI's Delmar L. Bloem Award for Distinguished Service for "outstanding leadership of ACI Committee 325, Concrete Pavements."

Katherine Heidel (BSCE '95) and husband Stuart West welcomed Claire Elizabeth West in June 2007.



Claire Elizabeth, daughter of Katherine Heidel (BSCE '95)

Greg Hillman (BSCE '93) is a Project Manager at the real estate investment firm of Behringer Harvard in Dallas. He is the proud parent of Joshua Dean Hillman, who is now one year old.



Joshua Dean and Greg Hillman (BSCE '93)

Clayton F. Hinton (BS ArchE 1999) Project Engineer at Holland Engineering LLC, recently earned an MBA from UT Tyler. Holland Engineering provides professional structural engineering services to private and public sectors.

Shay Ralls Roalson (MSEWRE '99) is the proud parent of Malcolm Roalson, born August 2007.



Malcolm, son of Shay Ralls Roalson (MS '99)

00's

Nat Ativitavas (Ph.D. '02) currently works for oil and gas company PTT Public Company Limited in Thailand and is the proud parent of Nawat Ativitavas, born in August 2007.



Nawat, son of Nat Ativitavas (Ph.D. '02)

Rose Marie Klee (BSArchE '02), was presented with the ASCE Texas Section Service to People Award for distinguishing herself with special service to people, bringing credit to profession.



Rose Marie Klee (BSArchE '02)

Yong and Huimin Zhao (Ph.D., 2002), welcome their second child Norman Yi-Yuan Zhao, who was born on February 28, 2008.



Norman and Estella Zhao, children of Drs. Yong and Huimin Zhao (Ph.D., 2002)



Anne Marie, daughter of Shannon Harty (MSEWRE '00)

To receive a **free t-shirt** for your future engineer, send us a photo and your baby's name, birth date, etc. We'll include it in the CAEE Newsletter AND mail you a t-shirt compliments of the Friends of Alec Annual Giving Program.

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