Outstanding Young Alumnus Michael Brack (BSCE/BA 1994, MSCE 1996) was an early proponent of building information modeling (BIM). The Norman Hackerman Building on the UT campus was one of the first buildings designed using BIM.
Greetings from Austin! In this issue of the CAEE Newsletter, we are recognizing a few of the accomplishments of our alumni, students and faculty.

During our alumni banquet last November, nine new members were inducted into the CAEE Academy of Distinguished Alumni and our Outstanding Young Alumnus was honored. Each has made significant and varied contributions to the profession. We also feature four of our most recent alumni as they begin their professional careers or graduate studies.

Recent visitors to Austin have undoubtedly noticed that Waterloo Park is closed to the public due to the construction of the Waller Creek Tunnel. CAEE alumnus Bill Espey led the design team for the new tunnel, which will divert floodwater from downtown Austin, and also studied Waller Creek during his graduate studies in the 1960s. He shares his unique perspective on this fascinating project.

In October, faculty members Jack Breen and Bob Gilbert were honored by ASCE. Jack was recognized as a Distinguished Member. Bob and Shadi Najjar received the Norman Medal for their paper on the design of deep foundations. Two new faculty members joined the department during the 2011-12 academic year. Mike Blackhurst joined the group in construction engineering and project management and Steve Boyles joined the group in transportation engineering.

In the future, we will be mailing our printed newsletter once a year and distributing electronic updates more frequently. If you are not receiving copies of our electronic news briefs, UT ENGINEER, please update your e-mail address and contact information on our website and click the “Stay in Touch” link: www.caee.utexas.edu

Finally, I would like to thank you for your support of the department. Our alumni, parents, corporate partners, and friends have been extremely generous during the past year, and we are sincerely grateful.

Robert L. Parker, Sr. Centennial Professor in Engineering and Department Chair

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### Calendar of Events

**CAEE Alumni Seminar Series**
Join fellow graduates for this year’s alumni seminar and earn one hour of professional development credit for renewal of your PE license.

- **March 5**
  - Houston - Federal Reserve Bank

- **March 9**
  - Austin - PRC Commons

- **April 9**
  - Dallas - Huitzzollars

- **April 23**
  - San Antonio - Petroleum Club

This year’s speaker, Dr. Daene McKinney, will discuss his research on high mountain-glacial watersheds. He was part of an international field expedition that explored management options of dangerous glacial lakes in the Nepal Himalayas.

**April 5**
CAEE Student Banquet
Etter-Harbin Alumni Center

**May 18**
Cockrell School Commencement Ceremony
Erwin Center

**October 26**
Alumni Banquet & Academy Induction Ceremony
Etter-Harbin Alumni Center
New Faculty Profiles

Michael Blackhurst
Assistant Professor
Construction Engineering and Project Management

Blackhurst earned a master of science in environmental and water resources engineering at the University of Texas at Austin. He received doctorate degrees in engineering and public policy as well as civil and environmental engineering from Carnegie Mellon University. While working as a graduate research assistant at CMU’s Green Design Institute, Blackhurst developed life cycle assessment tools to track water use in economic models. Results of the work have been profiled in The New York Times and National Geographic.

His research focuses on the sustainability and equity of urban infrastructure systems given uncertainty and variability in future resources provisions, infrastructure and technology performance, user behavior and life cycle impacts. He hopes to provide decision support and methods to transition to more sustainable infrastructure systems.

Stephen Boyles
Assistant Professor
Transportation Engineering

Boyles joins the department as an assistant professor in transportation engineering. He received a Ph.D. and a master’s degree in civil engineering from the University of Texas at Austin. He previously served as an assistant professor at the University of Wyoming in the Department of Civil and Architectural Engineering.

His research interests include network modeling, dynamic traffic assignment (such as large-scale simulation of transportation systems), transportation user behavior and infrastructure systems.

With undergraduate degrees in mathematics and civil engineering, past employment in traffic operations, and research experience in multiple domains, Boyles aims to build a strong research program at UT based on fundamental innovations in transportation systems analysis and on their application to critical issues in practice.

Faculty Promotions

Mary Jo Kirisits was promoted to Associate Professor, Loukas Kallivokas and Eric Williamson to Professor, and Michael Barrett to Research Professor. Their promotions will be effective at the beginning of the 2012-13 academic year.

Steel Bridge Competition

The UT steel bridge team placed 5th overall in the regional competition and received 2nd place in the display category. During the competition, students assemble a bridge that they have designed and fabricated and then load it with steel to test its strength and stiffness.

Travel Grant Winners Announced – Fall 2011 and Spring 2012

In celebration of Charles Kolodzey’s (MSCE ’46) passion for travel and cultural experiences, the Charles Kolodzey Travel Grant Program was established in 2009. It provides PhD students with the opportunity to attend technical conferences, give presentations about their dissertation research, and develop a network of colleagues at other universities.

The fall 2011 recipients are: Roshan Kumar (Transportation), Brent Stephens (Building Energy and Environments), Nancy Larson (Structural Engineering, Mechanics, and Materials), and Anthony Bentivegna (Structural Engineering, Mechanics, and Materials). The spring 2012 recipients are: Yeon Jeong Ha (Environmental and Water Resources Engineering), Ambarish Banerjee (Transportation), and Mustafa B. Erten (Geotechnical).

CAEE Teaching Awards

Maria Juenger received the 2011 Departmental Teaching Award for “excelling in teaching and demonstrating exceptional motivation of students in the classroom.” Ken Stokoe received the 2011 Ervin S. Perry Student Appreciation Award which is presented to a faculty member who best meets the ideals of “an excellent teacher and a good friend.”
Established in 2003, the Outstanding Young Alumnus/Alumna Award recognizes a graduate of the Department of Civil, Architectural and Environmental Engineering under the age of 40 who has distinguished himself or herself with outstanding service and contributions to the engineering profession.

Michael Brack, P. E., is President of Datum Engineers, a structural engineering firm founded in 1937 with offices in Dallas, Austin, and San Antonio. He joined the company after graduating from UT in 1996, and became a principal in 2004. During his time at Datum, he has been responsible for a wide variety of projects spanning higher education, laboratory, healthcare, commercial, government, K-12, and residential sectors. He was an early proponent of building information modeling (BIM) and first implemented BIM in 2006 with the $125M Experimental Science Building (Norman Hackerman Building) project for the University of Texas at Austin. Other projects include the Scott & White Center for Advanced Medicine, the Mira Vista office development, 1407 Main Street Lofts, and the St. Edward’s University Natural Science Facility. He is currently involved in the new Austin Downtown Library and the Cockrell School’s Engineering Education and Research Center (EERC).

Brack has served as President of the Austin Chapter of the Structural Engineers Association of Texas and as a director on the State Board. He also served as the President of the Austin Chapter of the Society for Marketing Professional Services. He is a past member of the Austin Chamber of Commerce and the Real Estate Council of Austin.

ASCE Distinguished Member

John E. Breen (Ph.D. 1962), Nasser I. Al-Rashid Chair Emeritus, was recently recognized as a Distinguished Member by ASCE. Since 1852, only 615 individuals have been elected to Distinguished Membership and it is the highest recognition that the American Society of Civil Engineers confers. It is reserved for members of the society who demonstrate acknowledged eminence within the profession.

Breen was honored for his seminal research contributions in the areas of reinforced and post-tensioned concrete bridge design, for leadership in the development of code provisions for loads and reinforced concrete, and for a career dedicated to educating and mentoring generations of structural engineers. Breen is a member of the National Academy of Engineering.

The Distinguished Members Class of 2011 was formally inducted during the 141st Annual Civil Engineering Conference in October. To view his introduction at the ceremony, visit www.asce.org/distinguished-members-class-of-2011.

ASCE Normal Medal Award

Robert Gilbert, geotechnical engineering professor, was awarded the ASCE’s 2011 Norman Medal, which is the most prestigious award given by the society for a technical paper. Awarded annually since 1874, Gilbert and Shadi Najjar (Ph.D. 2005) were recognized for a paper that could improve the reliability and efficiency of deep foundations in constructing bridges and other structures.

The paper, “Importance of Lower-Bound Capacities in the Design of Deep Foundations”, spawned from an engineering challenge to provide high reliability for an offshore oil and gas facility being built off the coast of West Africa. Construction of the facility was taking place in deep ocean water on soil that is lightweight but very strong. This type of soil had never been encountered by engineers. Because of this, Gilbert said, there was uncertainty about the structure’s foundation. Calculations of the facility’s capacity - or amount of weight it could safely support in the soil - varied greatly when engineers used the standards methods of assessment. What adds to the practical contribution of the paper is that the proposed lower-bound capacity, which is typically not formally or explicitly considered in reliability-based design, can be computed using simple physical models and can be readily verified during construction.
Where Are They Now?  Each spring the department recognizes the accomplishments of outstanding students and faculty. We would like to share the stories of our spring 2011 student award winners.

Joyce Chiu  
**ARE Leadership Award**

Joyce Chiu is up for adventure and challenge. “I am excited about all the opportunities that are out there,” says Joyce, who received her B.S. in Architectural Engineering from UT in May 2011. Now a first-year law student at Pepperdine University in Malibu, California, Joyce looks forward to an interesting new home as well as studying abroad in London next fall. As for future plans, Joyce explains, “The rest is still a mystery, but I’m sure I’ll enjoy finding out!”

She was “honored and humbled” to receive the ARE Leadership Award, presented to an architectural engineering student who demonstrates outstanding leadership in campus and community activities. She says, “my leadership would not have been made possible had it not been the people that supported me, and the community that was daring enough to follow me, and for being blessed with the skills to lead.”

Ashley Evans  
**CE Leadership Award and John A. Focht Academic Excellence Award**

In her first year of graduate school, Ashley Evans is already working on solutions to complex water issues. Ashley completed her B.S. in Civil Engineering with Highest Honors in May 2011 and is currently pursuing her M.S. in Environmental and Water Resources Engineering (EWRE) at the University of Texas.

Working with assistant professor Mary Jo Kirisits, Ashley is researching the effects of nutrient limitations on biological drinking water treatment. She explains, “Excessive bacterial production of extracellular polymeric substances (EPS) prematurely clogs drinking water filtration. Reducing EPS production will allow for greater time between backwashing, thereby increasing the percent water recovery and decreasing the energy required for backwashing.” After finishing her M.S., she hopes to carry her school experiences into the industry as an advocate for implementing innovative solutions to age-old problems.

Alec Gagnon  
**Werner W. Dornberger Academic Excellence Award**

When Alec Gagnon entered UT on a whim, he had no idea the decision would lead him to his current job performing structural analysis for aircraft modifications. His choice was clearly the right one; last year, he received the Werner W. Dornberger Academic Excellence Award, given to an architectural engineering student who started at UT-Austin as a freshman, earned the highest GPA and completed the degree in four years. “I felt very honored to have won the award,” shared Alec, “especially with all of the other great students in my class.”

After completing his architectural engineering degree in May 2011, he began working as a structural analyst at L-3 Communications in Greenville, Texas, providing design support and analysis documentation and working as a liaison to solutions for major structural modifications and systems integration as needed for military and commercial aircraft.

Eleanor Reynolds  
**Outstanding Teaching Assistant Award**

Having completed her B.S. and M.S. degrees at UT, Eleanor Reynolds now lives in Seattle, where she works as a structural engineer for Magnuson Klemencic Associates, an award-winning structural and civil engineering firm. She is currently designing twin towers in Seoul, Korea, and a three-tower development in Nanjing, China.

She has taken up a personal challenge to learn Mandarin, and come spring, she plans to learn to sail. Her goals don’t stop there. “My immediate goal is to become the best designer that I can be,” says Eleanor. Eventually, she would like to bring her passion for structural engineering into developing countries to research “economically-feasible materials and methods of construction” to design structures capable of providing “life safety in seismic events.”

Eleanor greatly enjoyed the two years she worked as a graduate teaching assistant. “It was inspiring to work with such talented, motivated, and engaging students.”
J. Stephen Ford, M.S. 1974, Ph.D. 1977 co-founded Zahl-Ford, Inc., a firm which specializes in structural condition assessments, strength and serviceability failure investigations, and repair and strengthening projects. The firm also provides structural consulting services for large, commercial architectural projects. Within the organization, Ford leads technical teams and serves as an “internal consultant” to his peers and younger engineers. Many of his projects involve evaluation and/or renovating existing buildings and designing repairs for buildings that have strength or serviceability problems. Several of his projects have received state or national awards. Ford also received the ACI Wason Medal for Most Meritorious Paper along with Donald C. Chang and John E. Breen in 1983 for papers related to his research at UT.

Bilal Hamad, M.S. 1979, Ph.D. 1990 has served as the Mayor of Beirut, Lebanon since June 2010. He is also a Professor of Structural Engineering and Concrete Technology in the Department of Civil and Environmental Engineering at the American University of Beirut (AUB). His research interests include design and behavior of reinforced concrete structures, bond and development of reinforcement, and concrete technology. He has more than 80 publications and received the ACI Structural Research Award in 1995. He was elected an ACI Fellow in 2003. Additionally, Hamad is the founder and General Manager of CODE Consultants and Designers, a firm that offers integrated technical services. He has also designed commercial, educational, recreational, religious, and residential projects in Lebanon, Jordan, Nigeria, Saudi Arabia, and other Arab Gulf states.

H.S. Lew, Ph.D. 1968 is a Senior Research Engineer at the National Institute of Standards and Technology (NIST), where he participates in a broad range of research programs in the fields of structural, earthquake, and materials engineering. He also served as Chief of the Structures Division of the Building and Fire Research Laboratory (1989-1999). He has published over 150 articles, papers, and reports on the performance of structures, construction safety, and failure investigations of structures. The quality of his research efforts have been evidenced with two ACI Wason Medals and the US Department of Commerce Gold Medal. Lew has also played an outstanding leadership role in contributing to the development of codes and standards by serving the various committees within ACI, ANSI, AISC, and ASCE/SEI.

Leo Linbeck III, M.S. 1987 is President and CEO of Aquinas Companies, LLC, which has three main business lines: construction management, life science pre-venture technology development, and real estate development. Since joining the leadership team at the company, its annual revenues have grown from $40M to nearly $500M. After earning a master’s degree from UT Austin, he obtained a MBA from Stanford’s Graduate School of Business. He currently teaches MBA students as an adjunct professor at Rice University’s Jones Graduate School of Business and as a lecturer at Stanford’s Graduate School of Business. Linbeck is also very involved with PreK-12 education reform, especially the expansion of high-performing charter schools in low-income communities.

Donald F. Meinheit, Ph.D. 1977 worked for Wiss, Janney, Elstner Associates, Inc. (WJE) for 27 years before retiring in 2006. He is currently an Affiliated Consultant with the firm, where he continues to consult on a broad variety of projects mostly in the areas of concrete properties, concrete design, concrete behavior, precast/prestressed concrete, and anchorage to concrete. He also mentors young staff at WJE on concrete related problems and is well known within the firm for always being available to staff for thoughtful discussion on technical topics. His technical contributions and achievements extend well beyond the firm, as he is active in ACI, PCI, and CRSI. He has been elected as Fellow of ASCE and ACI and is co-author of the PCI Design Handbook procedures for design of headed stud anchors.

Alexis S. Sacre, M.S. 1977 was a structural engineer with Middle East Consultants in Beirut before coming to UT Austin to earn his MS degree in geotechnical engineering. He worked for the European office of D’Appolonia Consulting Engineers in Brussels where he was part of several large projects, primarily designing foundations for nuclear power plants.
and offshore structures. In 1983, he graduated with a MBA from INSEAD in Fontainebleau, France and soon began working for the Abela Group of Companies, an international food service and hotel management company. After 14 years with Abela, he joined Coca-Cola Hellenic Bottling Company and was promoted within the company to various positions throughout Europe. From 2008-2011, he served as the President of the Middle East Business Unit, a complex operation that serves thirteen countries.

**Jerald L. Schnoor, M.S. 1974, Ph.D. 1975** holds the Allen S. Henry Chair in Engineering at the University of Iowa. He was elected as a member of the National Academy of Engineering for his pioneering work using mathematical models in science policy decisions. He has also testified several times before Congress on the environmental effects of acid deposition and the importance of passing the 1990 Clean Air Act. Since 2003, he has served as the Editor-in-Chief of *Environmental Science and Technology*, a leading journal in environmental science and engineering and currently serves on the EPA Science Advisory Board and National Advisory Environmental Health Sciences Council for the National Institute of Environmental Health Sciences. His research areas include environmental observatories, water quality modeling, global change and sustainability, and phytoremediation.

**Grant R. Thompson, B.S. 1975, M.S. 1977** joined Mobil Oil's Offshore Engineering Group after completing his graduate studies. At the time, the oil and gas industry was rapidly expanding into new frontiers in the deepwater Gulf of Mexico, the North Sea, offshore Eastern Canada, and the Arctic. Starting out as a geotechnical engineer in a small group of offshore specialists, he progressed up the technical ladder and helped build a staff capable of designing and building production systems that could safely produce hydrocarbons in these regions. He also played a key role in the development of new design methodologies for mudslide-resistant offshore platforms in the Gulf, iceberg-resistant, gravity-based structures offshore Canada, and large-diameter, driven pile foundations for North Sea platforms. Thompson retired from ExxonMobil in 2011 after 35 years of service.

**Dean Van Landuyt, B.S. 1982, MS 1991** has worked at the Bridge Division of TxDOT since receiving his undergraduate degree. He has designed numerous overpass structures and was a member of the team that designed the San Antonio “Y” segmental bridge. While earning his master’s degree, he built and tested the first curved prestressed box girders subjected to lateral tendon breakout. After returning to TxDOT, he maintained a presence in research by actively promoting and directing experimental testing of bridge deck behavior at free edges, full-scale shear testing of reinforced concrete beams, and innovative bridge railings. He designed the first concrete banister railing, the Texas Classic, which is used throughout the country both in restoration and new construction. His design of the West 7th Street Bridge in Ft. Worth will be the world’s first precast concrete network arch when completed in 2013.
Jorge Zornberg, professor of geotechnical engineering, has dedicated over 25 years to the advancement of geosynthetics through his professional practice as a design engineer, a professor, a researcher, and now as president of the International Geosynthetics Society (IGS), a non-profit organization founded in 1983.

“Geosynthetics are planar products manufactured from polymeric materials,” explains Zornberg, “which are used with soil or rock in engineering projects.” The result is high-performance materials that can last for centuries and can be used to construct roads, airfields, railroads, embankments, retaining structures, reservoirs, canals, dams, and landfill liners and covers; they are also used in mining, aquaculture, and agriculture. In short, geosynthetics have become indispensable within the profession.

Elected IGS president in 2010, he leads a group of five officers and a council of 24 individuals who represent more than 2,900 individual and corporate members around the world—all involved in the design, manufacture, sale, use, testing, teaching, and/or researching of geotextiles, geomembranes, and related products and technologies.

“The core purpose of the IGS is to provide the understanding and promote the appropriate use of geosynthetic technology throughout the world,” says Zornberg. “We are not promoting the use of geosynthetics for the sake of it. We are promoting its ‘appropriate’ use because this will lead to enhanced performance of engineering projects.” His term as president will end in 2014, and until then he will continue to improve communication within the organization and with sister international societies (such as the ISSMGE). “I believe that a focused effort on communications will lead to a major expansion of the benefits derived from our society’s wealth of knowledge,” says Zornberg.

He earned his B.S. from the National University of Cordoba in Argentina, his M.S. from the PUC of Rio de Janeiro in Brazil, and his Ph.D. from the University of California at Berkeley. In recognition of his scientific contributions, Zornberg has won many prestigious awards, including the Presidential Early Career Award for Scientists and Engineers (PECASE), awarded by President George W. Bush in 2002.

In 2003, he joined CAEE, where he teaches undergraduate courses on geotechnical engineering, graduate courses on earth retaining structures and geoenvironmental engineering, and conducts research related to geosynthetics and environmental geotechnics, soil reinforcement, earth retaining and waste containment structures, and numerical and physical modeling of geotechnical and geoenvironmental systems.

Associate Professor Carlos Caldas focuses on essential challenges related to data, information, and knowledge management in construction engineering and project management, which have far-reaching implications and benefits to our society. “Improvements in project execution have broad and long-term consequences,” says Caldas.

In recent decades, infrastructure and construction sectors have swiftly moved toward globalization; however, rapidly evolving regulations, heightened standards, and increasing project complexities complicate this shift. Caldas fuses his knowledge of civil engineering, construction management, and computer science to bridge the gap between the challenges of computational research and the applied aspects of civil engineering and construction.

Three main, interrelated themes of research occupy much of his work: 1) intelligent and automated construction job sites; 2) leveraging technology to improve construction processes; 3) knowledge discovery and transfer techniques.

Caldas is exploring the use of information, sensing, video computing, and spatial-temporal analysis technologies to automatically compare on-site conditions with applicable plans, standards, and specifications. His objective is to use integrated and automated data analysis to determine project status of construction operations. He plans to extend his future research to include “dynamic data analysis for proactive project controls, information fusion, pattern recognition in sensing systems, integration with simulation and optimization models, pull technologies for project information flow management, and building information models.”

In 2003, after earning his doctorate in civil engineering from the University of Illinois at Urbana-Champaign (he earned his B.S. and M.S. in Brazil), Caldas joined faculty in CAEE. He was particularly impressed by “the quality and reputation” of the Construction Engineering and Project Management (CEPM) program. He received the Construction Industry Institute’s Researcher of the Year Award in 2009, honoring his research contributions.

At UT, Caldas and his team develop and test real-time 3D modeling algorithms; identification, localization and tracking technologies; computer-aided critical operations planning research; and automation feasibility analyses. Teaching students how classroom theory translates into real-world solutions is a key component of the program, says Caldas.
Oguzhan Bayrak, Robin Tuchscherer (MSCE 2006, Ph.D. 2008) and David Birrcher (MSCE 2006, Ph.D. 2009) received the 2011 George D. Nasser Award from the Precast/Prestressed Concrete Institute. This award recognizes the paper published in the PCI Journal that is most “worthy of special commendation for its merit on the design, research, production, or construction of precast/prestressed concrete structures.”

Michael Engelhardt received a Regents Outstanding Teaching Award for 2011. The awards recognize faculty across the UT System who serve our students in an exemplary manner.

Karl Frank received the Lifetime Achievement Award from the American Institute of Steel Construction (AISC). The award honors individuals who have made a difference in the advancement of the structural steel design and construction industry, and gives special recognition to individuals who have provided outstanding service over a sustained period of years to AISC and the structural steel design/construction/academic community.

Hillary Hart was installed as president of the Society of Technical Communication, an organization dedicated to advancing the arts and sciences of technical communication with an international membership of more than 7,000 individuals.

Fernanda Leite was selected as a recipient of the Construction Industry Institute (CII) Distinguished Professor Award for 2011. The award honors faculty who incorporated published CII research findings in the courses they taught over the previous calendar year.

David R. Maidment received the 2011 Quentin Martin Best Practice-Oriented Paper from the Environmental and Water Resources Institute of ASCE. The paper, “Linking GIS, Hydraulic Modeling and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida”, was co-authored with Sergio Martin (Ph.D. 2006) and Venkatesh Merwade (Ph.D. 2004).

Daene McKinney received the 2011 Environmental and Water Resources Institute Service to the Profession Award. This award recognizes and honors an ASCE member for outstanding leadership, activities, and achievement in service to the profession in the field of water resources planning.

Danny Reible received the 2011 Malcolm Pirnie/AEESP (Association of Environmental Engineering and Science Professors) Frontier in Research Award, which honors an individual who has advanced the environmental engineering and science field through recognized research leadership and pioneering efforts in a new and innovative research area.

Ying Xu received a CAREER award from the National Science Foundation for her project “Emission and Transport of Polybrominated Diphenyl Ethers (PBDEs) in Indoor Environments.” PBDEs are used extensively in the US as flame retardants in consumer products and building materials. She also received the 2011 Yaglou Award presented by the Academy of Indoor Air Sciences in recognition of outstanding work from a young promising researcher within the indoor air sciences.

Zhanmin Zhang and two of his graduate students, Epigmenio Gonzalez and Wenxing Liu, were selected to receive the Best Paper Award by the 8th International Conference on Managing Pavements Assets (ICMPA).

Jorge Zornberg, A. Malek Bouazza, and John McCartney (Ph.D. 2007) received the Best Paper in Geosynthetics International for 2010. The paper is entitled “Geosynthetic capillary barriers: current state of knowledge.”
When Bill Espey studied Waller Creek as part of his dissertation in the 1960’s (“A Study of Some Effects of Urbanization on Storm Runoff From a Small Watershed”), he never imagined that almost half a century later he would be leading a $144 million Waller Creek Tunnel project to divert flood waters from downtown Austin.

He became familiar with Waller Creek, which winds through the University of Texas campus, in the mid-1950s when he came to UT on a football scholarship. He found his way to Civil Engineering, where he completed his B.S., M.S., and Ph.D. “Maybe I can attribute my engineering career to my poor football skills,” he laughs.

“I was very fortunate to get a good sound foundation in engineering, hydraulics, and hydrology at UT,” says Espey, noting in particular the impact of his professors “the 3 M’s: Carl Morgan, Frank Masch, and Walter Moore, as well as former dean Earnest Gloyna.”

Much of his groundbreaking work in engineering and hydrology began at UT; the urban unit hydrograph equations that he presented in his dissertation have been used in design and floodplain delineation throughout the country. And his work with Waller Creek, which has come full circle, brings extraordinary benefits to the City and people of Austin.

“The results of the Waller Creek Tunnel project will be a drainage/floodplain/erosion solution that the City of Austin can use to create a master plan to guide development and improvements that will create an urban oasis,” says Espey.

Like many creeks in Central Texas, Waller Creek is prone to flash flooding, particularly along the lower portion, which flows through the eastern edge of downtown Austin to Lady Bird Lake.

In search of an effective flood control solution, in 1999 the City of Austin selected Espey Consultants, Inc. (the environmental and engineering consulting firm founded by Espey in 1993) and Kellogg Brown & Root Services to finalize the design concept, prepare construction plans and provide management services for the construction of the project. In 2006, the Austin City Council and Travis County Commissioners agreed to a unique funding solution for the project, establishing a tax increment financing district (TIF), in which the taxes generated from the increased property values within the TIF will be used to finance the project. Construction started in 2011.

The project includes a mile-long, underground tunnel extending from an inlet structure at Waterloo Park to an outlet near Lady Bird Lake. The tunnel portion of the project will be capable of diverting 100% of 100-year floodwater downstream to a lagoon at the edge of Lady Bird Lake. Also included in the project are two smaller, creek side inlets at 4th Street and 8th Street, which together will control the residual 100-year flood level in the creek to a depth of approximately four to five feet.

Because the tunnel elevation will be lower than that of Lady Bird Lake, it will contain water at all times; to prevent this water from becoming stagnant, the inlet facility features a pump station for the purpose of transferring water from the tunnel to Waller Creek. This means that perennial flows will be returned to Waller Creek, which currently runs dry during summer months. The inlet facility also includes an aeration system to ensure that water transferred to the creek will contain adequate levels of dissolved oxygen to support a healthy ecosystem, year-round.

Upon completion in 2014, the project will contain the
100-year floodplain within the channel of Waller Creek downstream of Waterloo Park and provide flood relief for nearly 28 acres of land currently subject to flooding and erosion, including approximately 42 commercial and residential structures and 12 roadway crossings. Once the tunnel is operational and the threat of flooding is reduced, the tunnel will allow public and private redevelopment of one million square feet of downtown Austin.

The people of Austin—sensitive to water and environmental issues and ever-protective of the natural terrain—expressed “overwhelming” concern, remarked Joe Pantalion (BSCE 1987), project sponsor, that the project respect the natural character of Waller Creek and Lady Bird Lake. The main inlet, a rather significant structure, has been designed with a tremendous attention to detail. It will be energy efficient, architecturally pleasing, and environmentally thoughtful, incorporating a series of rock structures that allow migration of certain organisms up an “ecological ladder” from the creek through the upstream dam. The same careful thought has been given to the outlet structure on Lady Bird Lake.

“A tremendous effort was put into ensuring that this project met the engineering objectives of effective flood control but also remained harmonious with the environmental needs of the creek and surrounding areas,” explains Espey. “We gave great respect to the natural beauty and integrity of the creek.”

Throughout his career, Espey has accumulated extraordinary professional achievements and accolades, including being named Engineer of the Year by the Texas Society of Professional Engineers and Engineer of the Year by the ASCE Austin Chapter. He also received the EWRI/ASCE Lifetime Achievement Award, and Department of the Army Outstanding Civilian Service Medal for his work as a member of the ASCE External Review Panel. He is one of the founding member(s) of the Board of Trustees of AAWRE and a program evaluator for ABET. He was also appointed (USACE New Orleans District) as a member of the Independent Technical Review panel (ITR) for the USACE/FEMA Joint Texas Coastal Hurricane Surge Project.

In his 70’s, Espey is grateful for the opportunity to have worked on so many interesting projects around the country, and for being able to spend time with his family, including his wife of 51 years and his eight grandchildren. He appreciates that in many ways, the Waller Creek Tunnel project represents the best of the things he holds dear: engineering, innovation, and community engagement, all in the heart of Austin, his home.
We wish to express our sincere gratitude for the gifts given to the Department of Civil, Architectural and Environmental Engineering in 2011. Your gifts enhance our students’ educational experiences and help them become the future leaders of our profession.

You Are Part of a Tradition of Excellence

CAEE Alumni
Listed alphabetically by decade of first degree.

1930’s
B. Luther DeBerry
Farland C. Bundy
Jim Douglas
Earnest F. Gloyna
Edmund P. Segner
H. Douglas Steadman
James M. West

1940’s
Zuheir Y. Alami
Robert Earl Apple
Duryl M. Bailey
Charles R. Boatwright
Cecil E. Brazil
Mason C. Brown, Jr.
Ned H. Burns
Eugene H. Dawson
Conrad J. Derdeyn
Berry R. English
Ugur Ersoy
Hugh M. Farmer
Royce W. Faulkner
J. Ronald Ferril
George F. Foerster
Robert R. Gloyna
James W. Griffin
Jose I. Guerra
Donald R. Haragan
David M. Herring
Robert L. Hinkle
David M. Herring

1950’s
Walter Chiang
Edward R. Cervenka
Frank J. Castaldi
James W. Canning
Donald W. Klinzing
Douglas D. Lee
E.V. Leyendecker
Larry D. Long
Guadalupe J. Martinez
Alan B. Matejowsky
David K. Matlock
James H. Metzger
Sher Ali Mirza
John J. Panak
Charles M. Peare
Robert L. Pedrole
Robert R. Peter
Kirby W. Pickett
Bobby E. Price
Glen E. Price
Franz N. Rad
H. Ken Rigsbee
J. Wayne Roberts
S. A. Russell
M. Richard Scalf
John L. Staha
James H. Stephens
Curley D. Turner
Nixon M. Welsh
Jerril B. Wilson
Calvin E. Woods
Arthur H. Woytek
Jen Tai T. Yang

1960’s
James A. Almazan
Neal E. Armstrong
Ralph Keith Banks
James L. Barnard
William N. Berezovytch
Neil E. Bishop
John E. Breen
Maurice E. Bronstad
John P. Buckner
H.D. Butler
Michael E. Cavaller
Donald C. Chang
Jesse S. Covarrubias
Edward A. Davis
Marcos De La Rosa
Joseph J. Doane
Gene E. Eisenhauer
H. Chik M. Erzurumlu
Larry E. Farmer
Richard W. Furlong
William C. Garbade
David L. Goff
Berry R. Grubbs
Sam B. Horton
Elmer E. Huber
W. R. Hudson
Michael D. Hugh
Terrell A. Jackson
Marshall E. Jennings
Gary N. Johnson
M. Anderson Jones

1970’s
Timothy G. Abrams
Rennick B. Adams
David J. Bergquist
Joseph W. Blandford
Rudolph Bonaparte
Charles J. Brady
Johann Bremer
Benjamin A. Brooks
David R. Brossman
Sam A. Bybee
James W. Canning
Frank J. Castaldi
Brian H. Caudle
Edward R. Cervenka
Walter Chiang
Jee K. Choy
James T. Collins
James Colville
M. Frederick Conlin
John W. Cooper IV
Robert B. Daigh
David E. Daniel
Scott R. Daugherty
Joseph P. Dirk
John R. Glavan
George E. Green
Dewayne E. Hahn
Donald E. Harley
Tom R. Herrin
William M. Isenhower
Frederick A. Jay
Charles M. Johnson
Satoshi Kashima
Nadim R. Kaur
Dan T. Kinard
G. Michael Kyrish
Robert E. Lanser
Gerald F. A. Lowe
Randy B. Machemehl
Saburo Matsui
G. Vic McNallie
Donald F. Meinheit
Salvador A. Mercado
James D. Milner
Frank W. Neal
Donald S. Nellig
Margaret H. Nellig
Richard C. Patyrak
George W. Pearce
Randall W. Poston
Gerardo W. Quiros
Jack P. Randall
Stanley C. Rech
John M. Redfearn
Max O. Reinbach
Rafael A. Rios
Thomas W. Rioux
Thomas B. Sanchez
Basim A. Sayigh
Stephan M. Schilder
Ching-Peng Shen
Daniel R. Smith
Charles A. Sorber
Jack W. Stephens
Paul A. Sweet
Gary G. Taylor
Gerald L. Turner
Thong Q. Vo
James C. Wall
John T. Wall
Joseph P. Watson
Jim D. Wietthorn
Allen D. Woelke
Gary J. Wolff
John A. Wooley
John W. Woollen
D. Ray Young
Willie F. Zapalac

1980’s
Ahmad Khalid Abdelrazaq
Junius D. Allen
Ronald E. Anderson
Scott M. Anderson
John J. Anglada
Dante D. Archangeli
Siamak A. Ardekani
Patrick M. Bachman
Craig H. Benson
John J. Bowders
Timothy E. Bradberry
Chia-Pei J. Chou
William R. Cox
Randall S. Craig
Jeannie Lynn Darby
Samuel G. Dawson
B. Ray Derr
Thomas H. Diggs
William C. Eckert
Gary L. Fitts
David Garza
Gary Gehbauer
John B. Goodwin
Henry W. Goyette
Joannes A. Haakman
Ken C. Hall
Mikkel A. Hansen
John Q. Hargrove
Christopher J. Herbeck
Richard J. Hoar
David P. Hohmann
David R. Horos
Kerry J. Howe
Amy M. Huggins
Kevin H. Hugman
Norman D. Johns
Stephen L. Katz
Robert P. Keohoe
Daniel M. Kelmar
Jae Kwan Kim
Clifford G. King
Chun K. Ko
David C. Kopp
Jonathan A. Kopp
K. Wayne Lee
Paul T. Lundstrom
Lynn C. Mays
John R. McKie
Charles H. Metcalf
Patricia S. Metcalf
Susan E. Mullen
Mary Lou Rails Newman
Michael J. O'Shaughnessy
Timothy R. Overman
Michael M. Parker
Gregg A. Reese
John A. Rickard
Brian A. Rock
Alice H. Rogers
Rebecca Russo Bennett
John C. Schietinger
Tam M. Springob
J. Michael Stallings
Keith H. Stolzenberg
David M. Stuecker
Maghsoud Tahmoressi
Robert H. Thonhoff, Jr.
W. Todd Thurber
Victor Torres Verdin
Peter B. Townsend
Stephen J. Trautwein
Dean W. Van Landuyt
Ellen A. Wadsworth
Charles E. Walker
Shin-Tower Wang
James C. Williams
Kenneth P. Williams

1990’s
Sergio M. Alcocer
Robert W. Barnes
Stephen S. Bell
Valerie A. Briggs
Bruce C. Buchanan
Austin A. Bush
Scott A. Civjan
Patrick J. Coleman
Thomas C. Creese
Damon A. Davis
Philip C. Dell’Orco
Lin G. Espey
Brian A. Falconer
Erie J. Flanagan
Neil J. Glaser
Mark Gleason
Shawn P. Gross
Tara L. Hickey
Joseph O. Hoepken
Jeffrey L. Huddleston
David Neil Hudson
William F. Kelm
Gregory A. Kolenovsky
Kyle F. Kolst
Joseph P. Laird
Thomas P. Meserole
John Daniel Metzger
Jason P. Mirabal
Jeffrey W. Pangburn
Cyrus B. Parks
Thomas S. Patchimrat
Anthony C. Powers
Lilah T. Ramey
Marina M. Reynaga
Keith E. Riding
Shay R. Roalson
Rolando R. Rubiano
Yoshinari Sato
Samer N. Shammas
Kevin R. Skyrmes
Shauna A. Smith
Dailey A. Tipton
Mark R. Twede
Patrick M. Walsh
Derrick A. Watkins
Eric B. Williamson
Dingyi Yang

2000’s
Elissa D. Adams
Kelsey A. Ahern
Michael K. Alfortish
Asit N. Baxi
Juan Manuel Borjon
Victoria S. Cheplak
Alison J. Conway
Grayson M. Cox
Jennifer C. Duthie
J. Travis Fluit
Glenn A. Goldstein
Cody A. Graham
Beth A. Gross
David Alon Homme
Wenhan Hu
Joan German Hudson
Izydor Kawa
Brett A. Lake
Baltazar Lucero-Ramirez
Melanie M. Martin
Kristopher D. Pruner
Elizabeth A. Sall
Martin F. Scales
Todd J. Schram
Margaret K. Sherman
Kyle P. Steuck
Ruth E. Tobin
Katherine Osborne Valdez
Varunraj Valsaraj
Feng Wang

2010’s
Cynthia C. Amoles
Brian Paul Hanson
Jun W. Kang
Joshua W. Miksch
Clair M. Prichard
Anna Tachau Mimoun

Friends
Kathryn Alford
Franklin M. Anderson
Eugene and GeNelle Beck
Russell and Julia Blakeley
Louis M. Burton
Tobin J. Bushong
Charles E. Clinger
Arnold A. Cohen
William L. Colkie, Jr.
Frank G. Engels III
Raul F. Escandor
Cynthia J. Everson
Karl H. Frank
Lawrence Hester
Mark D. Hester
Mitchel R. Hirsch
James O. Jirsa
Tommy Judson
Mary N. Kemper
Rob and Linda Klein
Jonathan A. Kopp
Yeonette Knapp
Paul A. Kuhn
Howard M. Lijestrand
Gerald W. Lively
David R. Maidment
Van M. McElroy
Roy E. Olson
Burson Patton
A. Henry Pearson
C. Arnold Peterson
Willard Pfluger
John and Linda Reed
Robert and Lisa Reed
Kenneth and Lynn Stokoe
Robert and Barbara Sullivan
Robert D.M. Tachau
Michael Thompson
Floyd W. Tingley, Jr.
John A. Tyler
Edwin T. Upchurch
C. Michael Walton
Sharon L. Wood
Ken Woodington

Corporations and Foundations
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Bechtel Group Foundation
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National Water Research Institute
Nelson Architectural Engineers, Inc.
Pacific Life Phoenix Services LLC
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VAALCO Energy Inc.
Water Research Foundation

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Franklin M. Anderson
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Louis M. Burton
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Charles E. Clinger
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William R. Cox
B. Luther DeBerry
Frank G. Engels III
Berry R. English
Karl H. Frank
Donald E. Harley
Lawrence Hester
Mark D. Hester
Mitchel R. Hirsch
David P. Hohmann
Frank D. Holzmann
James O. Jirsa
Tommy Judson
Mary N. Kemper
Yeonette Knapp
Douglas D. Lee
Gerald W. Lively
Alan B. Matejowsky
Van M. McElroy
Mary Lou Ralls Newman
Donald L. O’Connor
John J. Panak
Burton Patton
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C. Arnold Peterson
Willard Pfluger
Randall W. Poston
John and Linda Reed
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Charles A. Walker
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Craig and Karen Benson
Beth A. Gross
Joseph P. Laird
Roy E. Olson
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C. Michael Walton
Feng Wang
Gary J. Wolff

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Lin G. Espey

Junius D. Allen
Ensoft, Inc.
John Q. Hargrove
Shin-Tower Wang

Merril A. Lowe Endowed Scholarship in CE
Gerald F. A. Lowe

Lin G. Espey
Alumni Updates

CAEE alumni have varied professions and interesting careers. Faculty, current students, and fellow graduates are always interested in learning about the lives alumni lead after they leave UT.

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

60’s
Carl E. Adams, Jr. (Ph.D. 1969) and his colleagues at ENVIRON International Corporation, garnered the coveted Grand Prize in the research category of the American Academy of Environmental Engineers (AAEE) 2011 Excellence in Environmental Engineering (E3) Competition. The award recognized ENVIRON’s patent-pending VOC BioTreat technology.

James Barnard (MSEHE 1969), a Black & Veatch engineer, was awarded Singapore’s Lee Kuan Yew Water Prize 2011 for outstanding contributions towards solving global water problems by either applying technologies or implementing policies and programs which benefit humanity.

70’s
After a 36 year career as partner in a consulting engineering firm, Gary G. Taylor (BSARE 1972) retired and started a new structural firm, Urban Structure, which specializes in small and midsized work for select clients. Richard L. Reed (BSARE 1991), joined him in this effort.

80’s
Ronald Anderson (BSCE 1986, MBA 1993) was named Chief Engineer for Water Services of the Lower Colorado River Authority (LCRA) located in Austin. Roberto Leon (Ph.D. 1983) a professor at Virginia Tech received a 2011 AISC Special Achievement Award for his significant contributions to the AISC Specification for Structural Steel Buildings and the AISC Seismic Provisions for Structural Steel Buildings. He was recognized for his research in the design of composite steel/concrete structural systems.

David Platten (MSCE 1980) of Walter P. Moore also received a 2011 AISC Special Achievement Award. He was recognized as structural principal in charge of the Dallas Cowboys Stadium for its innovative and record-setting long-span structure.

90’s
Greg Davenport (BSARE 1993) was promoted to Associate Principal and Senior Vice President at HKS, Inc. in Dallas.

Sanjeev Malhotra (MSCE 1991), a geo-technical engineer with Parsons Brinckerhoff, received the Clemens Hershel Award from the Boston Society of Civil Engineers Section for his paper “Design and Considerations of Offshore Wind Turbine Foundations in North America”.

00’s
Ryan A. Hall (BSCE 2009) is attending the New York University School of Law.

Herman “Gary” Lehman IV (BSCE 2007) was a 2010 Nominee for Malcolm Pirnie’s Dr. Paul Busch Prize Award. He recently accepted Board of Director position for the Texas section of the conservation group Trout Unlimited.

Eric E. Matsumoto (Ph.D. 2000) was promoted to full professor at California State University, Sacramento in the area of structural engineering.

In Memoriam
B. Luther DeBerry (BSCE 1937) worked for the Texas Highway Department for most of his career, only taking a leave of absence to serve in the military. His peers recognized him as the person who best represented the change to unified transportation planning and excellence in maintaining a multimodal program. Shortly before his retirement, the department established the Luther DeBerry Award to honor individuals who have made outstanding contributions to transportation in Texas. DeBerry was a member of the CAEE Academy of Distinguished Alumni.

Let us know about your future engineer and we’ll send you a free t-shirt, compliments of the Friends of Alec Annual Giving Program.
Jerry Schnoor (Ph.D. 1975) was one of the first individuals to investigate the ability of plants to take up toxic organic chemicals and other pollutants and to apply the phytoremediation process - using plants to clean up contaminated soils - thus initiating a new green technology for the treatment of hazardous waste sites and improving and protecting the quality of groundwater.

He was elected into the CAEE Academy of Distinguished Alumni in 2011.