



CIVIL TALK

The Department of Civil & Environmental Engineering Annual Newsletter
Brigham Young University - Summer 2004

Again, we're happy to send greetings to our alumni and friends of BYU Civil & Environmental Engineering and bring you up to date on what's going on in the department. We're looking forward to another new academic year with both returning and new students. Our undergraduate enrollment remains approximately the same, with about 90 students in each class, and we now have over 100 graduate students.

I feel that the quality and strength of our department is our outstanding faculty. Each faculty member continues to contribute significantly in his own way to the success of the students and to the achievement of department goals. We truly enjoy working together. This past year our faculty had over 30 technical papers published, made over 40 scholarly presentations, wrote some 30 research proposals, and were awarded research grants for over \$1.5 million. We have added a new faculty member to the geotechnical group. Travis Gerber joined us last winter upon Les Youd's retirement. We look forward to Dr. Gerber's contributions to the department in teaching and research (see page 12 to learn more about Travis).

Our outstanding students continue to work hard and accomplish great things. First and foremost they are serious scholars and desire to prepare themselves for successful and productive professional careers. With their involvement in the seminar and ASCE student chapter, they are also preparing themselves for opportunities of service and continued learning. The student chapter had another successful year, winning the Certificate of Commendation nationally, and winning 2nd Place in the Rocky Mountain Conference. One of our seniors, Keith Woffinden, who was selected as our department outstanding student, won first place in the National Mead paper contest (see page 11).

The articles in this newsletter highlight some of the outstanding research being conducted by our faculty and students. Undergraduate students, as well as graduate students, are involved in research which adds more meaning and appreciation to their senior level courses. The department has gained local and national acclaim because the faculty and student work is in applied research and is of high quality and usefulness.

Again, as faculty and students, we sincerely thank the dozens



of you who have contributed to our student scholarship fund. During this past year, we have been able to financially assist almost 150 undergraduate and graduate students. We deeply appreciate the work of the Scholarship Society in fund raising and also as our curriculum advisory board. The Scholarship Society will again sponsor the annual Alumni Chicken and Fish Fry at Homecoming October 15th (see announcement on page 10). We hope to see all of you there.

We are pleased to pass along to all the alumni your professional and personal activities and achievements in our "Alumni Updates." Also, please feel free to stop by and visit your friends in the department whenever you are in the area. We wish you all a successful and enjoyable year.

Sincerely,

Wood Miller

Rollins Research in South Carolina



A new \$531 million bridge is rising over the Cooper River between Mt. Pleasant and Charleston, South Carolina. When completed, the new Ravenel Bridge will be the longest cable-stayed bridge in North America. The bridge is scheduled to open for traffic Summer 2005. The towers rise 573 ft above the surface of the water and the bridge features a 1,546 ft. main span across the river. A rendering of the completed bridge is shown in Fig. 1. The bridge will replace two older bridges which were inadequate based on both capacity and seismic resistance.

Geotechnical investigations prior to design of the new bridge found that liquefaction would occur to about 40 ft on the Mt. Pleasant approach to the bridge in a repeat of the M7.3 Charleston Earthquake of 1896. After contacting Caltrans, South Carolina Dept. of Transportation (SCDOT) engineers were told of a new technique for evaluating the lateral resistance of full-scale deep foundations in liquefied sand using controlled blasting. This technique had recently been

used to evaluate lateral resistance of 12 inch diameter piles at a test site on Treasure Island in San Francisco Bay. This collaborative research study was directed by Prof. Kyle Rollins of BYU and Prof. Scott Ashford of UCSD. SCDOT decided to use the new controlled blasting technique to evaluate the lateral resistance of the foundations for the new bridge. Profs. Rollins and Ashford were hired as consultants in conducting the load tests.

The test foundations were 8.5 ft diameter reinforced concrete shafts which extended to a depth of 150 ft. After some experimentation, Rollins and Ashford came up with a plan where explosives were detonated at three to four levels in each of eight blast holes. Robust pore pressure sensors developed at BYU were installed across the site. These sensors survived the extreme blast pressures and indicated that liquefaction was produced to a depth of about 40 ft. Following liquefaction, sand boils developed at the ground surface and water flowed out of the ground for over 10 minutes. After blasting, lateral load was applied to the test foundations using two hydraulic actuators provided by UCSD to produce 1000 kip loads. In a subsequent test, lateral load was applied after blasting using the Statnamic

loading system provided by Applied Foundation Testing. The Statnamic load system, acting like a rocket sled, could produce lateral loads of 1000 kips in about 0.2 seconds and better simulate the dynamic loading produced by an earthquake. A photo of the Statnamic sled positioned adjacent to the test foundation is shown in Fig. 2.



Fig. 2

Based on the test results, designers used a reduction factor of 70% to account for the reduced lateral resistance. The diameter for the bridge foundations was eventually increased to 10 ft. Rollins was awarded a \$105,000 grant from the National Science Foundation to conduct a detailed analysis of the test results. Based on these studies, “p-y curves” are being developed to define the load-displacement relationship of liquefied sand. These results have been combined with those from Treasure Island to account for the effect of pile diameter.



Fig. 1 Rendering of Cooper River Bridge

Guthrie Pavement Research

In cooperation with colleagues at the Portland Cement Association (PCA), the Utah Department of Transportation (UDOT), and the University of Massachusetts at Dartmouth, Dr. Spencer Guthrie and several students in the BYU Highway Materials Laboratory are investigating design and performance issues associated with the use of cement-treated materials in pavement construction in northern climates. The construction of durable pavements in cold regions often requires improvement of the native soils and aggregates to a non-frost-susceptible condition to prevent damage due to frost action. Repeated freeze-thaw cycles can lead to degradation of pavement base materials, and sustained freezing temperatures can result in frost heave during winter and accelerated cracking of the pavement surface in spring as the melting of ice lenses causes supersaturation of the roadbed. Chemical stabilization with Portland



Undergraduate student Tyler Young compacts a cement-treated specimen in the laboratory.



cement has been shown to be an effective method for reducing frost susceptibility, but the pavement industry needs additional data and techniques, beyond existing anecdotal information and practices, for determining the optimum amount of cement that should be added to a soil or aggregate during pavement construction.

While at the Texas Transportation Institute, Dr. Guthrie assisted with the development of a new laboratory test, the Tube Suction Test, for determining the amount of cement necessary to ensure adequate durability of cement-treated materials. The objective of his present research is to evaluate the sensitivity of the test to different cement contents, develop threshold criteria appropriate for cold-regions materials designs, and compare results to traditional methods of testing. As a result, extensive laboratory work is currently underway at the BYU Highway Materials Laboratory to examine the effects of different

levels of cement treatment on the performance of soils and aggregates in a variety of tests. The laboratory has been substantially upgraded with new equipment for this and other research, including a state-of-the-art environmental chamber that permits simulation of a wide variety of climates worldwide.

In many cases, material samples have been obtained from active pavement construction projects utilizing cement, which facilitates field monitoring of the in-situ cement-treated materials through the seasons and enables direct comparisons with laboratory characterizations. Coupled together, the laboratory and field data generated in this project should provide unprecedented documentation of the effects of cement on cold-regions pavement performance and assist PCA, UDOT, and other agencies in developing materials engineering specifications and design protocols for cement-treated pavement materials.



Graduate student John Hema obtains a material sample from a UDOT pavement construction site.

Dr. Saito Completes Two Work Zone Safety-Related Research Studies

Safety in highway construction and maintenance work zones has become an important issue in the field of transportation engineering. As the nation's highway system has begun to deteriorate and the number of vehicle-miles-traveled per year has increased, it has become more common to perform construction and maintenance work while the roadway is in use. In highway work zones, narrower roadways and a prevalence of roadside objects compromise the safety of motorists and highway workers. The challenge for the transportation engineer in designing work zones is to find a way to balance three goals: the accomplishment of the construction or maintenance work itself, the preservation of the capacity of the roadway, and the safety of the highway workers and the motorists.

As transportation engineers seek to increase safety in highway work zones, they have examined several different techniques. These include keeping drivers alert, aware, and awake; making workers and the work zone more visible; improving the control of traffic in merging areas to make lane changes more predictable; developing better safety devices; and reducing traffic speed and speed variance in the work zone. Dr. Saito and his graduate students finished two studies in the past two years that are related to the last of these three techniques.



The first study, conducted from May 2001 to June 2002 with Brent M. Turley, evaluated the efficacy of arrow-panel caution displays to warn the drivers about work zones downstream. Non-directional arrow-panel displays are used on highway work projects as an early warning caution sign. This study compared the non-standard "Dancing Diamonds (used by some DOT's in western states)" and "Flashing Diamonds (requested by UDOT for evaluation)" with the standard "Flashing Box" display (see picture below). Field research showed that "Dancing Diamonds" was associated with cautious driving (2-mph reduction, statistically significant at a 95% confidence level), whereas the "Flashing Box" had no association. Comprehension driver survey questions showed little difference in comprehension between the three different signs.

Dancing Diamonds

Flashing Box

Flashing Diamonds



Flashing sequence of arrow-panel caution displays for work zones

Opinion survey questions showed that motorists strongly considered either diamond display better than the "Flashing Box" at prompting safe driving near highway work. The second study, conducted from May 2002 to June 2003 with Jeanne M. Bowie, evaluated the efficacy speed monitoring display (SMD) in increasing work zone speed limit compliance. For the field study, three main conditions were analyzed: a no-treatment case, with the MUTCD signs and barriers; a treatment case using the SMD; and a treatment case using a police vehicle. In the no-treatment case, average vehicle speed was reduced about 3 mph as vehicles entered the work area of the work zone. With the SMD, average vehicle speed was reduced 7 mph. With the police vehicle, average vehicle speed was reduced about 9 mph. (These conclusions are valid at a 95% confidence level.) The results of the study suggest that the SMD is a promising option for state DOTs. Police presence has been reported by many studies as the most effective speed limit enforcement in work zones but it has been recognized as the most expensive method. This study indicated that SMDs could be a cost-effective alternative to police presence for encouraging the drivers to comply with work zone speed limits.

Dr. Saito and his research assistants are currently working on research studies related to the issues of roundabouts, raised medians, school-zone policies, center-line rumble strips, work zone user costs estimation procedures, and work zone traveler information methods.

Alumni Update

Doug Kisby '00

Doug is in the Air Force working for the Navy. He works with a team that does humanitarian work for the Northern Pacific Islands. He was stationed at Nellis Air Force Base, Las Vegas, Nevada. After coming home from Iraq in July 2003, he was transferred to Guam. Who knows where he will go next.

Stephen Palmer '90

Stephen is currently serving as a Lieutenant in the Civil Engineering Corps of the U.S. Naval Reserve. His previous assignment was officer-in-charge for 120 person detachment of Seabees throughout Utah. He received Utah Naval Reserve Officer of the Year in 2000. Stephen has been married for 21 years to his wonderful wife, Joan, and mother of their four children. Their oldest son, James, recently returned from serving a mission in Argentina and their oldest daughter, Kristin, is working as a dental assistant in Hawaii. Their daughter, Amy, is Laurel class president and enjoys playing the clarinet and piano for Young Women's meetings and their son, Brenden, is close to earning his eagle scout and enjoys playing the trumpet.

David Jensen '98

David has been in Phoenix for nearly 5 years after being in Denver for 1 year following

grad school. He is still getting used to the climate, but 70 degrees on February 7 is very nice. Something has to make up for the 115 degrees that it will be on July 7. David has been working for Tetra Tech, Inc. (Formerly Simons, Li and Associates) in the infrastructure division for nearly 5 years. He has worked on many types of surface water resources and drainage projects for mostly the Flood Control District of Maricopa County. He obtained his PE license in Arizona in the summer of 2001. He has enjoyed keeping up with several other BYU grads that are down in Phoenix. He is still learning about the in's and out's and up's and down's of consulting. David has been able to work with some experts in the field of dam safety and technology, which has been a very rich and rewarding experience that he hopes will continue. Best wishes to all BYU Civil Engineering grads, students, and faculty.

Douglas J. Sereno '87

Before joining the Port of Long Beach, Douglas worked 15 years for Montgomery Watson Harza, an international environmental and infrastructure firm, where he was promoted to Vice President in 2001. Almost his entire 15 years with MWH was spent with the City of Los Angeles Wastewater Program where he served as Consultant Program Manager in the Environmental Engineering Divi-

sion of the Department of Public Works. The major portion of his work was dedicated to the \$1.2B Hyperion Treatment Plant full Secondary Expansion, which was a once-in-a-lifetime opportunity. He left MWH to seek greater managerial challenges with the Port of Long Beach where he manages the Engineering Program Management Section with 12 Program Managers who are responsible for all capital projects at the Port of Long Beach. The Port typically handles over 4.5 million cargo containers a year and, in conjunction with the Port of LA, delivers over 40% of the nation's container cargo annually. The work is challenging as the capital program delivers more than \$250M projects each year. Douglas is currently serving as Bishop of the Anaheim 1st Ward with his wife in the Primary Presidency. They have 4 children, with their oldest, who was born while they were at BYU Provo, in her freshman year at BYU Hawaii. Their Church service and professional life leave little time for other interests but his wife is very active in PTA, Scouting, and civic service; while he just tries to find a little time with the family, watching the kids play soccer and camping with the Scouts. They love skiing and camping as a family and spending time in his home state of Hawaii when they can.

Alumni Update

Michael E. Neeley '80

Michael has worked for the Corps of Engineers for 21 years now. His immediate family has moved to Idaho Falls. He is handicapped and cannot drive. He is interested in Engineering Jobs in the Idaho Falls area, preferably with the Federal Government. He noticed that most of the professors who taught him have retired. He is glad he attended and graduated from BYU. Michael and his wife have six children, three boys and three girls. Three of whom are now attending BYU Idaho and the other three are at home in junior high and high school.

Czar Smith '01

Czar began working with the Waterford Institute as a BYU student. He is still there writing software to teach kids how to read, type, and do Math and Science. This work is very rewarding and he feels like he can make a difference in millions of lives. His wife, Kristen, is awesome. Together they have 3 children. Meg is 4, Erika is almost 3, and Czar is almost 1. When he is not working, Czar is home with the kids. Kristen is always home with the kids, which can be stressful. They have a small comfortable home in Lindon on 1/2 acre. There's plenty of outside space for the kids to play. The Smith's are happy and have been greatly blessed.

Chris Garris '93

Chris was promoted in January 2004 to the position of Geotechnical Department Manager for Terracon in Salt Lake City, Utah. He is active in the engineering community and serves as Secretary/Treasurer for the Utah ASCE Section, and has been nominated to serve as President-Elect for the Section for the upcoming 2004/2005 term. Chris lives in Pleasant Grove, Utah with his wife, Susan, and their four children.



Ira & Mary Lou Fulton

Engineering College Name Changed

On November 6, 2003 Brigham Young University named its College of Engineering and Technology in honor of businessman and philanthropist Ira A. Fulton thus making it the Ira A. Fulton College of Engineering and Technology.

"We are pleased to honor Ira Fulton for all he and his wife, Mary Lou, have done in support of BYU," said BYU President Cecil O. Samuelson. "Not only have they generously given of their means but also of their time and talents. We thank them for their sincere interest in BYU's success."

The Fultons have made contributions of impact campuswide, including purchasing of one of the fastest supercomputers in American higher education (named in honor of Mary Lou), helping to fund the new Joseph F. Smith Building and Athletic Complex and financing many

student scholarships. Additionally, the Fultons have provided for improvements to the Psychology Department, School of Technology, the Harold B. Lee Library and the Museum of Art.

A resident of Phoenix, Fulton is president and chief executive officer of Fulton Homes, which has been building in the metro Phoenix area for more than 25 years. Under Fulton's leadership, the company has gone from constructing several homes in 1975 to nearly 1,500 homes in 2002. The company donates 50 percent of its profits to meaningful causes, principally those that improve education.

"We feel fortunate to have the Fultons as friends of BYU," said K. Fred Skousen, BYU Vice President of Advancement. "And we look forward to building upon that important relationship in the years ahead."

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BRIGHAM YOUNG UNIVERSITY
CIVIL & ENVIRONMENTAL ENGINEERING
368 CLYDE BUILDING
PROVO, UT 84602-4081

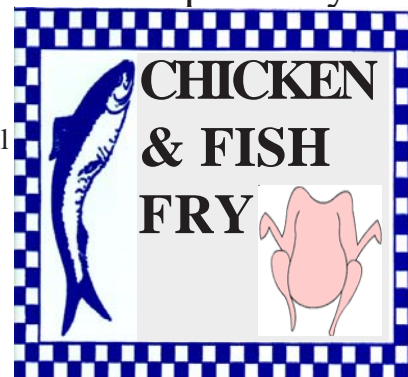


Alumni Activities



Alumni Chicken & Fish Fry brought to you by the Scholarship Society

Don't miss the chance to celebrate and reunite with old BYU friends. Come to the Civil & Environmental Engineering / Scholarship Society / Alumni Homecoming Reunion **October 15, 2004**. The dinner this year will be at the BYU Conference Center, just East of the Marriott Center. We will begin with leisurely socializing from 5:00 to 5:30 p.m., on the east patio where you can visit with friends and make new acquaintances. At 5:30 p.m., our annual Fantastic Chicken & Fish Fry Dinner will begin with fresh halibut and salmon from Alaska, and grilled chicken, followed by a short program. We will be finished by 7:15 p.m. which will enable you to enjoy other Homecoming activities on campus that evening.



Please send us the following information to BYU Civil Engineering., Attn: Janice, 368 CB, Provo, UT 84602. You may also RSVP at (801) 422-2811 or by email civil@byu.edu.

Name: Last _____ First _____ Middle _____
 Address: _____
 City/State/Zip: _____
 E-mail: _____
 Phone: wk () _____ hm () _____ Fax () _____
 Is this a new address? _____ Coming to Annual Dinner: No. attending _____ Adults _____ Children _____

Please RSVP by Friday, October 8.

Scholarship Society

Board of Directors

Doug Ferrell, Society Chair
 Olani Durrant
 Jake Dustin
 Brent Farr
 Reese Goodwin
 John Harper
 King Husein
 Bruce Larson
 Fred Nelson
 Melvin Nichols
 Rick Wheadon
 Brent Wright

BYU Civil and Environmental Engineering Scholarship Society annually provides many students with scholarships to help them as they complete their undergraduate and graduate degrees within our department. We encourage you to join us in this effort which will bless the lives of deserving young men and women. Students are very appreciative of scholarships they receive. All contributions are given in direct scholarship funds to students based on accomplishments and need. One of our goals as a department is to strengthen and increase alumni involvement. Please fill out the form below and return it with your gift for the students. If you would like to be considered as a member of the Board of Directors, please contact Dr. Wood Miller, Department Chair, (801)422-2811.

NOTE: Once again all money given will be matched 1 to 1 for alumni and friends of BYU. This matching program will be ending December 31, 2004. Contact Janice, (801)422-2817, janice_sorenson@byu.edu, for requirements to receive match.

BYU Civil & Environmental Engineering Scholarship Donations

Name _____ Date _____
 Street Address _____ Amount _____
 City, State, Zip _____
 Phone () _____ Fax () _____ Email _____
 Company matches contribution. Company Name: _____

DR. BENZLEY LEADS STUDENTS TO ETHICS BOWL WINS!

Each semester the BYU Student Leadership Council sponsors "Ethics Bowl." "Ethics Bowl" is a debate like competition based on pertinent ethical case studies. The program was developed by Robert Latenson of Illinois Institute of Technology. The competition provides the opportunity for undergraduate students from all



The Nixons (Left to Right) Scott Thayn, Keith Woffinden, Ashley Brown, Charlie Thomas, Russell Lay, Robby Tuttle.

disciplines to hone their skills in defending ethical positions. Thirty-two teams, consisting of 4-6 students per team, compete each semester in BYU's formal intramural program.

This academic year, teams that were formed from the engineering ethics class (i.e. RELC 492) captured first place each semester in the BYU Ethics Bowl competition. Another team from this class placed fourth in the Winter Semester competition trailing the 1st place team by only 1.5 points.

The Members of these winning teams were:

The Nixons (1st Place, Winter Semester 2004)

Ashley Brown, Russell Lay, Scott Thayn, Charlie Thomas, Robby Tuttle, Keith Woffinden.

The Altitudes (1st Place, Fall Semester 2003)

Chris Anderson, Brian Menghini, Hector Noriega, Adrian Sosa, David Whitworth, Tyler Young.

The Benzley Bears (4th Place, Winter Semester 2004)

Ryan Butters, Michael Clift, Sean Dick, Conrad James, Chris Mehalic, Krystal Miller.



The Benzley Bears (Left to Right) Conrad James, Michael Clift, Chris Mehalic, Sean Dick, Ryan Butters. Not shown Krystal Miller.



The Altitudes (Left to Right) David Whitworth, Chris Anderson, Tyler Young. Not shown Adrian Sosa, Hector Noriega, Brian Menghini.

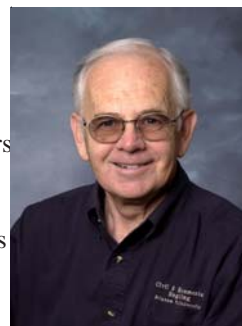
Keith Woffinden Wins National Meade Paper Competition

This year a paper by Keith Woffinden was selected to represent the student chapter of ASCE in the 2004 Daniel W. Meade contest. The Daniel W. Meade contest was established in 1939 in honor of the 67th President of the American Society of Civil Engineers and promotes ethics in civil engineering. This year's topic for the contest was "Engineers and Politics."

Keith presented his paper in the non-technical paper competition at the ASCE Rocky Mountain Regional Conference, which was held at Colorado State University this year. After winning first place there, Keith forwarded his paper to ASCE for competition at the National level. Keith was notified on May 24th that he has now won that contest as well. He will present his paper at the ASCE National Conference in Baltimore, Maryland, in October. Congratulations, Keith!

Scholarship Society

Historically, the Department of Civil (and Environmental) Engineering has not had very much by way of discretionary scholarship monies. When I became Department Chair of Civil and Environmental Engineering in the fall of 1992, these funds amounted to only a few thousand dollars - largely the result of unsolicited donations by friends and department graduates.



Shortly after my becoming chair, Mel Nichols ('72), one of our most constant donors, visited the department and encouraged us to do more to attract external scholarship funds. I pointed out to Mel that we also had letters from King Husein ('71) which had accompanied his unsolicited donations. King had also asked if there was anything further he could do for the department. Fortunately, I had just completed ten years as Associate Dean in the college office where one of my assignments was college development. Through this experience, I was aware of a window of opportunity, since closed by the university, that a department could organize its own development program.

As Mel and I talked, we outlined the basic format for a department scholarship society and identified others who might be willing to participate. After getting university approval, Jay Terry, a university development officer, and I traveled to Fresno, California to meet with King. He enthusiastically agreed to become a board member. We also met with Jim Easton ('62) in Sacramento who committed to participate as well. Follow-on conversations with Lee Wimmer ('68) in American Fork, Doug Ferrell ('78) in Los Angeles,

(continued on page 16)

Civil Engineering Welcomes New Faculty, Travis Gerber

This past December, Travis Gerber joined the Civil and Environmental Engineering faculty at Brigham Young University.



Travis, a Utah native, came to BYU as a freshman in the fall of 1988. He initially had some difficulty in choosing between a major in mechanical or civil engineering, having received a scholarship from each department. Travis had spent his summers growing up working for the family construction business building bridges, water tanks, and other concrete structures. Due to his familiarity with civil works, and the fact that the civil engineering scholarship was \$50 more than the mechanical one, Travis decided to pursue civil engineering. (Sold his soul for 50 bucks, he sometimes jokes).

Travis served a mission for the church in Paris, France from 1989 to 1991. Upon returning to school, he became involved in the student chapter of ASCE,

building the concrete canoe and serving as a chapter officer. Travis graduated summa cum laude with his bachelor's degree in April 1994, and was recognized as the department's outstanding graduate.

Between his schoolwork and ASCE activities, Travis met his wife-to-be, Becky. Becky, who lived across the street, was the roommate of a girl Travis had been trying to date. Becky and Travis were "just friends" until Becky (in her own words) "came to her senses." The two were married in May 1994. The Gerber family expanded in 2001 when Becky and Travis were blessed with a sweet daughter, Holly.

After completing a master's degree from BYU with a geotechnical emphasis in 1995, Travis worked locally at Horrocks Engineers on a variety of municipal projects. He then joined Woodward-Clyde in 1997 as a geotechnical engineer, initially working on

the \$1.4 billion, design-build I15 Corridor Reconstruction Project in Salt Lake City. After accumulating enough experience, Travis became a licensed professional engineer in the state of Utah.

In 2000, Travis began doctoral research at BYU with Dr. Kyle Rollins, studying soil-structure interaction of liquefied sand and laterally loaded deep foundations. During his studies, Travis continued in professional practice, working on projects for local offices of URS Greiner Woodward Clyde, Kleinfelder, and Intermountain GeoEnvironmental Services.

Travis completed his doctorate in August 2003. Travis looks forward to teaching courses and conducting research in the areas of soil mechanics, foundation engineering, and earthquake engineering. Travis' grandmother is especially proud of her grandson who not only got paid to play in the dirt but now gets to teach about it at BYU.



In Remembrance

Glen Hacking Calder

Glen Hacking Calder, 79, passed away peacefully on May 17, 2004 after 28 years of courageously battling Lou Gehrigs disease. Glen was born to Leo and Lucile Hacking Calder on July 25, 1924 in Vernal, Utah. He was a veteran of WWII. He served an LDS Mission to the Southwest States. He married Shirley Marie Smith on September 19, 1952 in the LDS Logan Temple.

Glen taught Civil Engineering at B.Y.U. for 36 years and loved experimental projects and working with his grandchildren in the garden. Glen served faithfully throughout his life in various church callings.

He is survived by Marie (Jim) Ricks, Judy (Steve) Shipp, Glen (Meridee) Calder, David (Connie) Calder, Gary (Heidi) Calder, Linda (Scott) Sumsion, Irene (Brent) Hauver, Diane (Chris) Groberg and 42 grandchildren. He was preceded in death by his eternal companion, Shirley Marie Smith Calder and grandson, Evan James Ricks.

~Published in the Daily Herald on May 19, 2004.



Ramesh Manekju Khona

Ramesh Manekju Khona, P.E., Vice President of Gannett Fleming, died June 7, 2004, after a short illness, surrounded by his family at the Hershey Medical Center. He was 64.

Ramesh had 40 years of engineering experience. For the past 36 years, he worked on transit projects for Gannett Fleming, and was named a Vice President in 1988. Ramesh was named "One of the Ten Outstanding Graduate Students" at Brigham Young University in 1968. Thirty years later, he received the Honored Alumni Award in recognition of Outstanding Achievement by the College of Engineering and Technology at Brigham Young University. He also received an Honor Award in appreciation for important contributions to the American Consulting Engineers Council (ACEC) in 1992. He was a member of many professional engineering societies and served on several national committees.

Ramesh was born and raised in Rangpur, Gujarat, India. He earned his Bachelors degree in Civil Engineering from Gujarat University and his Masters degree in Civil Engineering from Brigham Young University. It was at Brigham Young University that he met and later married Marian A. Clement of Porterville, CA.



Ramesh was a born traveler. He loved seeing the world with his family, and he enjoyed his constant business travel. He also was an avid soccer fan and coached all of his children's soccer teams.

He was a generous man who looked for ways to help those just starting out, and he spent the past several years serving on the Board of Directors of the Civil & Environmental Engineering Scholarship Society of Brigham Young University.

Survivors include his wife of 34 years, Marian A. Khona of Mechanicsburg, PA; a daughter, Kristina R. Khona of Alexandria, VA; a son, Kishan R. Khona of Alexandria, VA; a son, Kevin R. Khona of Mechanicsburgs, PA; a brother, Chiman M. Khona of Toronto, Canada; a sister, Shoba Lathia of Elizabethtown, PA; a sister, Rema Solanki of India; a sister, Anupama Momaya of India. He was preceded in death by his father, Manekji Trikamji Khona, his mother, Pubai Khona and two sisters, Hira and Jaya.



In lieu of flowers, the family is requesting that donations be sent to, the "Ramesh M. Khona Excellence in Engineering Scholarship Fund." Contributions may be sent to: Brigham Young University, Ramish M. Khona Scholarship Fund, 280 Clyde Building, Provo, UT 84602.

~Published in the Patriot-News on June 9, 2004.

Awards for Anderson and Sorenson

David Anderson, Laboratory Technician for the Civil Engineering Dept., was recently recognized with a Presidential Appreciation Award. David received the award for selflessly serving the needs of students and faculty over a period of many years at the University.

Colleagues note that David's work is always of the highest quality. His performance and creativity in the laboratory are stellar. He contributes to research programs far more than is expected of a typical technician. He is constantly challenged to accomplish tasks that others would consider impossible or impractical, and many would not even attempt, yet David always achieves incredible results. When a task needs to be accomplished, whether large or small, difficult or easy, we can always depend on David.

Regarding his personal traits, faculty colleagues describe how David exudes a positive attitude that influences everyone around him. He seems to bring life to a room when he arrives. He is one of those people who enjoys whatever he is doing and wants others to enjoy it with him. When equipment fails or plans don't work out, David wastes little time feeling sad or blaming others. He is the first to come up with alternative solutions and the means for implementing them. He is motivated and invigorated by a challenging environment and enjoys overcoming problems. Once you give him the objective he will use his own initiative and every resource at his disposal to ensure that the objective is reached. That he should fill this role for one or two faculty would



David Anderson receiving award in Faculty Meeting. Formal University recognition to be held August 24.

be remarkable, but all 18 faculty members seem to have the same impression. David has a way of organizing his time and student helpers so that the work gets done and this has allowed the Civil Engineering Department to move forward in unprecedented ways.

Janice Sorenson, Executive Secretary for the Civil Engineering Dept., was awarded the Ira A. Foulton College of Engineering and Technology Outstanding Staff Employee Award at the College dinner in February 2004.

Janice will have been in her current position as Executive Secretary for five years this coming June. In this position she is responsible for department budgeting, course scheduling, graduate programs, and numerous faculty issues. Her total tenure at BYU exceeds 30 years which includes experience in areas of the University such as Food Services and the Counseling Center.

She adores her 8 delightful grandchildren and loves to watch them participate in all the functions that active children enjoy. She also keeps up on BYU athletics so that she can survive the endless armchair coaching

antics of the Civil and Environmental Engineering Faculty. Her favorite pastimes include reading, playing the piano, accompanying choirs, going to plays, and gardening.

Janice is passionately dedicated to her work. She willingly accepts new and extremely challenging assignments presented to her by the department leadership and diligently prepares herself to be competent in these new areas. She is loved and appreciated by all Civil and Environmental Engineering students because she is a true advocate for them in all of their academic issues. There are many students who wouldn't have graduated without Janice's help which goes beyond the call of duty. The faculty feel blessed to have such a competent person managing all of the issues that arise in the office. She is truly deserving of this special award.



Janice Sorenson receives her award from Dean Chabries

*Congratulations to both
David and Janice!*

ASCE STUDENT CHAPTER

Fall semester was filled with service and field trips. The semester began with an opening social at a local park, which included barbecue and fun games. Available for the students were field trips, one of which was to the local buildings being constructed on our campus. We provided service for junior high students through Building Big and assisted the BYU section of the Society of Women Engineers with Girl Scout engineering activities.

Toward the end of the semester, we enjoyed the elections for the officers of the upcoming year. Although we appreciate and miss the past officers, we have enjoyed getting to know the new officers and watching them step into their new positions.

2003 officers (see below):

Blake Unguren - President
Carole Turley - 1st Vice Pres.
Andrew Stewart - 2nd Vice Pres.
Travis Carroll - Treasurer
Becky Luker - Secretary
Seth Bowles – Public Relations



2004 officers (see above right):

Benjamin Griggs – President
Christian Auger - 1st Vice Pres.
Mackenzie Hanks - 2nd V.P.
Michael Abegg – Treasurer
Judy Weaver – Secretary
Emily Dibb – Public Relations



The Winter semester was exciting as we kept the service projects and field trips going while preparing for Rocky Mountain Conference. Though we had teams working on the preparations for the concrete mix and design for the canoe, teams practicing paddling in the icy water of Utah Lake, and teams designing and building the steel bridge, all for Rocky Mountain Conference, we still enjoyed many other activities. We took a tour of the new athletic facility on campus, served the local schools with the ‘Math Counts’ program, held a Balsa Wood Bridge competition, and many other activities. By the time we got to the conference, we were ready to compete.

We competed in all the available competitions at the conference and did very well overall. Our technical and non-technical papers both took first place. Our canoe made it through four of the five races. It actually broke in half (literally) about six feet before the finish line of the fourth race, but our brave paddlers swam the remains of the canoe the rest of the way.

The steel bridge was very well built and served as a learning experience for us as well. Despite excellent design, it ended up being disqualified for measurement errors. Measure twice, cut once right? We had the only all-girl pre-design team. The project was a small retaining wall. Ours was one of the first to hold the required weight, but many others followed. Although we can’t claim complete victory, we ended up with second place over all, and everyone had a great time. Definitely an unforgettable experience for all involved.



We ended the year with a great closing social. We had great food and games, but the highlight was the snowball fight. Ever had a snowball fight in 70 degree weather? We have had an incredible academic year and look forward to the years to come.



Scholarship Society Cont.

Scott Larsen ('73) in Phoenix, and Jim Wilde ('72) in Las Vegas brought additional support and a willingness to serve. These six alumni and myself became our first Board of Directors with Mel as Chair of the Scholarship Society.

Shortly thereafter, we met at BYU to outline the organization, goals and operational procedures for the Scholarship Society. A goal to raise \$1,000,000 of endowed funding within ten years was chosen as our central effort along with the fostering of annual giving to support directly funded scholarships. We also outlined donation guidelines for the establishment of named scholarships wherein

donors who were able to make significant contributions could be recognized both by the university and our scholarship recipients. 100% of the interest accrued from these donations fund scholarships which carry the names of the donors.

The Scholarship program was announced to our alumni and friends early in 1993 and support began to build. Many thought the goal of \$1,000,000 was a bit lofty but the board was confident that it was reachable. Over the years, many others have served on the board and through their diligence and determination our endowed fund now stands at \$1,056,827.37 and we have thirteen endowed named scholarships. This

has been a monumental effort and all present and past board members, together with many generous donors, many of you included, are greatly appreciated.

It has been gratifying to see the more than one thousand students who have been financially assisted through this effort. As student needs continue to expand beyond available scholarship funds, the Board recently determined to continue seeking donations to the endowed fund as well as for direct scholarship support. I hope that each alumna will support this effort to whatever level possible. It is a wonderfully worthwhile cause to help young people reach their goal of entering our beloved profession.

~S. Olani Durrant

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