

CIVIL TALK

BRIGHAM YOUNG UNIVERSITY · CIVIL & ENVIRONMENTAL ENGINEERING DEPARTMENT · 2006

MESSAGE FROM THE CHAIR

On May 1st Dr. Steven E. Benzley became the new department Chair of the Civil & Environmental Engineering Department.

Dear Alumni and Friends,

I appreciate this opportunity to share with you a few significant things about our department. First, let me thank Wood Miller for his effective, devoted, and responsible leadership of the department for the past six years. Some of the significant accomplishments that transpired during Wood's term were: six new, extremely well qualified faculty members were identified, recruited and hired; the department successfully accomplished ABET accreditation; just recently, our portion of the college and university's Northwest Association accreditation evaluation was effectively completed; and, for the



Dr. Steven E. Benzley

first time, the US News and World Report rankings gave our department some deserved recognition. During this period the department's Scholarship Society achieved their initial goal of securing a basis of \$1 million to provide scholarships for our students. The Scholarship Society has now embarked on setting new ambitious goals and plans. Indeed, all faculty, alumni, friends and

students have benefited from Wood's efforts and we salute him for this.

What a great time to be a civil engineer, particularly one that is a student or alumnus of the BYU Civil and Environmental Engineering department. The local and global markets are offering many opportunities and challenges that we, as civil engineers welcome. Currently our students, as they begin their careers, are receiving numerous job offers. These offers are plentiful, not only because the economy is strong, but because these students are well qualified academically, socially, and professionally. We are pleased that both the National Academy of Sciences and the American Society of Civil Engineers are focusing on educational concerns of the future, *(cont. on pg 3)*

Doug & Nancy Ferrell - Honored Alumni 2006

This year, Civil Engineering had the opportunity to nominate a civil engineer to be recognized and honored as this year's college "Honored Alumni." We are pleased to announce that the University allowed us to honor not one, but two of our outstanding civil engineering alumni, Doug and Nancy Ferrell. The official honor and recognition for the Ferrell's will be during BYU's annual fall Homecoming celebration which will be held October 21, 2006.



For over twenty years, the Ferrell's have made significant contributions to our Civil Engineering department, BYU Swim Team, BYU (in general), their community, and the

professional engineering field.

Doug graduated from BYU Civil Engineering in 1978 and became a professional engineer in California in 1981. He is currently president of Patrell Engineering Group, Inc. and is serving as chairman of the BYU Civil & Environmental Engineering Scholarship Society.

Doug works with his wife, Nancy Patton-Ferrell, a BYU Civil Engineering 1979

(cont. on pg. 2)

Family Tradition - Civil Engineering

Ferrell's cont from page 1

Doug works with his wife, Nancy Patton-Ferrell, a BYU Civil Engineering 1979 graduate, who became a professional Civil Engineer in 1982. Together, they specialize in the engineering design of recreational water, theme park attractions, artificial rockwork structures and scientific element support projects. Doug and Nancy's expertise have included projects across the United States and in countries such as South Africa, Guam, Japan, Peru, and in the Bahamas. Together, they are currently registered in 30 states and in Guam. Chances are, no matter where you are from, they have worked on a project in your area. Recent projects include waterpark attractions for Knott's Soak City, Raging Waters and Six Flags Parks throughout the US, Shipwreck Rapids and Arctic Extreme attractions for Sea World in Orlando and San Diego, the

engineering for the rock structure in the Cabella's store in Lehi, the Lion Habitat at the entrance to the MGM Grand Hotel Las Vegas, and the entrance to the Aladdin Hotel in Las Vegas.

They worked on Disney's California Adventure Grizzly Rapids and Rock Mountain design, and are currently working on a Nemo project at Disneyland in California. Doug served as project engineer for the placement of the telescopes and support structures for the CHARA project on Mt. Wilson Observatory and the highly publicized Faulkes Telescope Project placed on the Haleakala Crater on the Island of Maui.

Doug met Nancy at BYU in 1978, while serving as her lab instructor in the Civil Engineering Mechanics of Materials Lab. They are the proud parents of four children, Monica, John, Jeff and Kirsty. Monica graduated from BYU in



Grizzly Peak ~



Tornado Six Flags Waterworld USA

2005 with her Masters degree in civil engineering and currently works with her mom and dad in their engineering firm. She also was a contributing member of the BYU women's swim team. John is currently a civil engineering major, and also swims for BYU. Jeff is serving a mission in Yerevan, Armenia, and plans on continuing his civil engineering degree and time on the swim team when he returns. Kirsty is a senior in high school, and has signed to swim with BYU this fall 2006. To complete the pattern, she plans on majoring in civil engineering.



Ferrell Family: Kirsty, Jeff, Nancy, Doug, John, Monica

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Welcome Dr. Paul Richards

Dr. Paul Richards grew up in West Jordan, UT and completed his Bachelors degree in Civil Engineering at Brigham Young University. While at BYU, Paul met and dated a fellow CE student, Robin Sevey. They were married the day after graduation and moved to San Diego shortly thereafter.

Paul completed his MS and PhD in structural engineering at the University of California, San Diego. Robin worked for a civil/structural design firm, Flores Lund and Associates until the arrival of their daughter Laura (4). They also have another daughter, Heidi (2), and son, Luke (deceased).

Dr. Richards' graduate work concentrated on the seismic performance of steel buildings. He was involved with several projects as a graduate student, including full-scale experimental verification of ductile moment connections with hospital project applications, and computer simulation of inelastic deformation capacities of shear links in eccentrically braced steel frames.

After completing his PhD, Dr. Richards worked in the San Diego office of Degenkolb Engineers, a west coast design/consulting firm specializing in seismic design and retrofit. He was involved in several projects including the renovation and expansion of the Hotel Del Coronado on Coronado Island in San Diego Bay, seismic inspection and retrofit of the LDS Los Angeles Temple,



and the design of the Emergency Department expansion and Annenberg Tower at the Eisenhower Medical Center in Rancho Mirage, CA. He is a licensed Civil Engineer in the state of California.

At BYU, Dr. Richards is continuing experimental work and computer simulation of structural performance under seismic loading. Current projects include experimental validation of pinned-beam connections for use in buckling restrained braced frames and quantification of column demands in ductile braced frames using non-linear time history analysis.



Chair message cont.

and are recommending a master's degree as the first professional degree. Most of the employers seeking our graduates desire this level of education for entering employees. We advocate this effort and want to be leaders in accomplishing this vision for our profession. Our faculty have always supported the idea that an advanced degree provides the best education and future for our students.

The following pages highlight some of our faculty, staff, and alumni. We are very excited to have Professor Paul Richards join us as the newest member of our faculty. He provides strength, energy, and excitement to our structural design area. In addition, Rodney Mayo was just recently hired to fill a new position in the department, that of assistant laboratory manager. Having Rodney on board now doubles our technician personnel, a much welcome and needed support for our faculty and students. Congratulations to Doug and Nancy Ferrell on being named the 2006 honored alumni from the Ira A. Fulton College of Engineering and Technology. This is a well deserved recognition for two of our department's greatest supporters.

The department welcomes your continued interest and support. Please feel free to come and visit, provide us with information you think might be important, and, most importantly, stay connected with us. I wish you the best in all that you do.

Sincerely,
Steve Benzley

The New CE En 332

Do you know what a sphygmomanometer is? How about a subcarangiform swimmer? Quick: How many steps should you take forward on a volleyball court to compensate for the additional downward lift induced on a top spin serve coming at you at 70 mph? Or where should you place your bat in your swing to make contact with an 84 mph curveball coming your way? These are some of the routine questions posed and investigated during Dr. Hotchkiss' renewed CE EN Hydraulics and Fluid Flow Theory class.

You'll remember CE EN 332 as a required junior-level course with three hours of lecture and a lab each week. Because the course is really a basic science, Dr. Hotchkiss teaches a general approach to fluids to establish a good foundation of understanding and then discusses specific civil engineering applications. For example, when discussing the concept of pressure head, he invites a BYU nurse to come to class and use a sphygmomanometer to measure the blood pressure of several students. In-class calculations show how a blood pressure of 120/80 translates into a column of blood several feet high. And that, of course, lends itself to discussion later in the semester about hypertension and the increased load on our heart, a wonderfully simple yet complex positive displacement pump. When Dr. Hotchkiss gets over his head, he calls on experts to clarify principles –



like President Samuelson, who has come to class to lecture on the heart, complete with illustrations of its pump characteristic curve, system curve, and operating point. It's quite an easy transition for the students to calculate pressure throughout a pipeline system as a result, including the effects of aging on pressure drop.

"It's all about fluids," Dr. Hotchkiss says often. A goal of the course is to have students think frequently about fluids applications in every day life. A common question asked on Mondays is "What fluids experiences did you have over the weekend?" Answers range

from skiing to creating circular hydraulic jumps in the kitchen sink for all of the family to see.

A recent semester-long project inspired student teams in the labs to develop ideas for a fluid mechanics movie. The DVD, completed last March by the Center for Instructional Design (CID), features a civil engineering student, Brad Stapley, as he takes a young woman to the Wilkinson Center Skyroom for dinner. His ambition, of course, is to impress this young lady with everything he knows about fluid mechanics. Students developed 10 different scenes based on what they learned in class. The draft script, developed by the CID, was provided to the CE EN 332 students so they could review it and provide technical corrections before filming began. From illustrating the 'hand-out-the-window-as-you-drive' experiment to a hapless demonstration of the unique characteristics of ketchup (a bingham plastic), Brad manages to have a first and last date all in one night. But in the process, he covers

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EMRL Update - by Dr. Norm Jones

The EMRL continues to be engaged in research in the areas of groundwater, surface water, and watershed modeling. Our main sponsor in this research is the U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi. On the groundwater front, we are developing tools that allow researchers to build and manipulate finite element meshes with tens of millions of elements on a PC platform. To achieve this, we use a disk-caching technique and a binary file i/o library called HDF5. We have also developed a new approach for 3D meshing of geologic units and have done research in the area of model-linkage.

The surface water modeling effort has expanded this year to include a new sediment transport model, a new flood extent model, a Lagrangian particle tracking model and several new tools for modeling hurricanes and storm surge. Due to the catastrophic events in Louisiana and the Gulf coast last year, interest in these capabilities has never been higher and many technological advancements are underway. Last November a group of six students traveled to Australia to work with engineers and model developers to develop materials for teaching engineers to use our new tools. The materials have already been used in two separate short courses



associated with engineering conferences.

In the watershed modeling area we are continuing to develop tools for floodplain modeling. The WMS is licensed by the FHWA for use by all state departments of transportation and we have been active in training many states on how to use the software for their hydraulic analysis and design needs. We have also done more work in the area of water quality modeling, particularly of man made reservoirs like Lake Powell and Lake Mead. This past year a group of 13 students traveled to Mexico and participated in conferences and workshops at two different universities. This program has been established as an official study abroad program of BYU and we anticipate that there will be further collaborations with our research partners there. (see <http://www.et.byu.edu/groups/cemexico/2006/>)

The EMRL supports 44 student researchers at the undergraduate, M.S., and Ph.D. levels. Approximately 12,000 organizations worldwide have used or are currently using the EMRL software.

332 cont. from page 4

almost a semester of fluid mechanics and provides 20 minutes of entertainment for all of the students and faculty in the Department.

Oh! And how many steps should you move forward, or where should you place the baseball bat? Students make predictions based upon drag and lift concepts, and then actually step onto the volleyball court and into the batter's box to test their theories. It's hard to tell who enjoys this 'experiment' more – the students or the student athletes who seem to enjoy 'bringing the heat' to a bunch of future engineers!

And a subcarangiform swimmer? How about a trout or salmon? Their swimming efficiency is improved dramatically as they take advantage of the forward thrust provided by the alternating shedding vortices shed by each tail flap. This process, of course, contributed to the famous failure of the Tacoma Narrows bridge decades ago. A lesson everywhere you look! Just remember...it's all about fluids!

Awards

Faculty Awards

Steven Benzley - Ira A. Fulton College of Engineering & Technology Outstanding Achievement Award which honors a faculty member who excels in teaching, research and/or service.

Brett Borup - ASCE Certificate of Commendation for work as ASCE Faculty Advisor

Hank Christiansen - Ira A. Fulton Excellence in Education Award which recognizes excellence in teaching combined with leadership in development, implementation, and dissemination of significant educational materials, programs, and curriculum.

Dean Fuhriman - BYU Emeritis Alumni Association Special Recognition Award - Alumni Association honors 10 of its most outstanding alumni that graduated 40 years ago for their achievements, leadership, and service.

David Jensen - AIAA Sustained Service Award - for sustained service to the American Institute of Aeronautics and Astronautics and for outstanding service and leadership in the technical and publications arena.

David Jensen - ASCE Fellow - the distinction of Fellow is the second highest membership grade within the organization.

T. Leslie Youd - ASCE Honorary Member - this is a very distinguished award as only 555 individuals have been elected to this grade of membership since 1853.

Student Awards:

Many students presented at TRB this past year including: **Aimee Birdsall, Rebecca Crane, Emily Dibb, Stephen Frost, William Hereth, Tyler Young,**

Student Presentations were also made at other conferences including ITE, AWRA, & Meshing Roundtable.

Aimee Birdsall - 1st Place Technical Paper at Rocky Mountain Conference

Kordel Braley - ITE Inter-mountain Section Paper Competition - 2nd Place

Ahmad Salah - AWRA UT Chapter paper - 3rd place

Alumni Awards:

King Husein - BYU Alumni Association - 2005 Distinguished Service Award

Matthew Francis - 2006 NEHRP Professional Fellow in Earthquake Hazard Reduction, awarded by EERI.

If you would like to submit an award you won during the year please send your name, the name of the award, and who you received it from to civil@byu.edu.

•••••
• *Ferrells cont. from page 2*

• Because all four of their children have/will swim for the Cougars, Doug and Nancy have done much over the years to contribute to this organization as well. Every year they donate their resources and their time to help the swim teams do their very best and have fun. Doug takes video footage and hundreds of action still pictures every year and produces a season review video for the men's and women's teams. Doug and Nancy always provide meals and open their home to the teams whenever they have meets or Christmas training in Southern California. They can always be seen at the California meets and very often make it out to BYU home meets in the Richards Building.

• We sincerely congratulate the Ferrell's and wish them the best in their future endeavors. On Friday evening, October 20, from 5-7 pm, in the Wilkinson Student Center (WSC) Garden Court, there will be a public reception where everyone may go to visit with and congratulate the Ferrell's on this award, along with all other university college Honored Alumni. We invite you to do so as you head to the Clyde Building that same evening for our annual department homecoming "Fish Fry" at 5:30 p.m.

• (see page 7 for more details on the fish fry)

ALUMNI ACTIVITIES



Alumni 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.

When: Friday, October 20, 2006
Where: Clyde Building Student Lounge
Time: Social Hour 5:00 - 5:30 p.m.
 Dinner 5:30 p.m. - 7:15 p.m.



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, by email civil@byu.edu, or online www.et.byu.edu/ce.

Name: Last _____ First _____ Middle _____

Address: _____

City/State/Zip: _____

E-mail: _____

Phone: wk () _____ hm () _____ Fax () _____

Is this a new address? _____ Coming to Annual Fish Fry: No. attending _____ Adults _____ Children _____

Please RSVP by Monday, October 16.

Scholarship Society

Board of Directors

| | | | | | |
|------------------|----------------------|-----------------------------|------------------|----------------|---------------|
| Neil O. Anderson | Jeffrey D. Armstrong | Doug Ferrell, Society Chair | S. Olani Durrant | Jake D. Dustin | Brent R. Farr |
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BYU Civil & Environmental Engineering Scholarship Donations

Please direct my gift to College Annual Fund: 30120438 Eng & Tech

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Please put **BYU only** on the 'pay to the order' of line and do not put anything in the notation line.

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*If you desire you may also include a separate letter of explanation regarding this donation.

Alumni Friends of BYU

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Where Are You?

We always enjoy hearing from our alumni! Please take a moment and fill in this short information form. We will compile the responses in future issues of Civil Talk so that you may have news of your classmates. We count your response as a vote in favor of continuing to publish this newsletter.

Alumni Update

Name _____ Spouse's Name _____ Date of Response _____
BYU Civil Engineering Degree(s) (level, date) _____
Other Following Degree(s) (level, date, institution) _____

Your Employer _____ Job Title _____
Job Function _____
Business Address _____
Is this a new address? _____ Work Phone () _____
Fax Number () _____ E-Mail Address _____
Web Site _____

Home Address _____
Is this a new address? _____ Home Phone () _____

We invite you to provide us with news of yourself. We are interested in your job description, jobs, new degrees, promotions, research, awards, publications, and news of your family and life outside work. News is welcome even if you do not wish to be included in our alumni news section. Also, **please attach your business card to this form when you return it.** Include this in the next Civil Talk Yes No

Please fold in half, tape on the top (so it will fit in postal machines), and mail.

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Alumni Update

Matthew W. Roberts '93

Matt currently works at the University of Wisconsin-Platteville. Matt received the Excellence in Teaching Award for new faculty from the American Society of Civil Engineers in June 2005 at the annual ASEE convention/conference. He has five children.

Jeffrey C. Smith '87

Jeffrey is now in his 19th year of employment with the City of Los Angeles. His first nine years he worked in the City's Wastewater program designing wastewater treatment plant and collection system improvements. For the last 9 1/2 years, he has been working for the City's Department of Airports (Los Angeles World Airports) as a Project Manager over design and construction of the Ontario International Airport terminal Expansion Program. He is also the Senior Project Manager over design and construction of Terminal, Cargo, Airfield, Utility, and Traffic infrastructure improvements at Los Angeles International, Ontario International, Van Nuys Regional, and Palmdale airports. He was recently promoted to Chief Airports Engineer, and now manages the implementation of the Department's \$2 billion CIP as well as to provide technical input to the \$11 billion LAX Master Plan environmental process.

Smith cont.

At home, the family is growing like weeds! Teyana is teaching 5th grade and ref'ing volleyball. Kelvin (17) is a senior, Kendal (15) is a sophomore, Breanna (13) is in 8th grade, and Evan (12) is in 7th grade. All are active in sports, band, school and church.

Tim H. Willard

Tim has spent his entire career to date with the Corps of Engineers. He started as a structural engineer working in a field office. After several years he moved to a project engineer involved more in construction contract administration. Then to Resident Engineer with a staff of about 16 people. During the early 90's he became involved with the Corps of Engineers Urban Search and Rescue Program. His role has been a structures specialist. The US&R Structures Specialist is trained in building collapse, shoring, & rescue techniques.

It has been Tim's opportunity to deploy to numerous disaster sites including the Northridge earthquake, Klamoth Falls, E.Q., Guanm E.Q., the Red River Flood, the Oklahoma bombing, 9/11, and Katrina. Some deployments are used to support COE missions while others support FEMA.

Willard cont.

Back at home the Utah Resident Office manages Design-Bio-Build projects at Hill Airforce Base, Tooele Army Depot, Ft. Douglas, and Durway Proving Grounds - with an annual construction placement of \$40,000,000. They design and construct hangars, runways, testing labs, dormitories, corrosion gutrol facilities, info structure and more.

Craig Boren '05

Having just recently graduated in August 2005 with a Masters degree in Civil Engineering, Craig was excited and at the same time apprehensive for what the future might hold. Luckily he ended up being hired by RBF Consulting in Phoenix, AZ where he currently works as a land development engineer. Some of his duties include design and development of plans describing new communities and homes in the Phoenix area. It has been both rewarding and challenging to say the least, but he is enjoying it very much.

Life outside work has been great. The transition in moving from Provo, UT to Phoenix, AZ has been hard, but he is finally adjusting. Having left the Provo area still single, he is learning and becoming acquainted with the singles scene in Arizona, which is fun!

Alumni Update

Paul S. Carver '77

Getting ready to start his 15th year at Suburban Water Systems in Southern California, Paul is also happy to watch his middle daughter, Danielle Jeppson, start her senior year in the civil engineering department and his youngest daughter Adrienne, begin her freshman year in the civil engineering program at BYU. (Thanks Nina and Connie for blazing that trail 30 years ago!) On a professional level, Paul is very involved in the water community in the San Gabriel Valley, being elected to the board of the Main San Gabriel Basin Water Mast in 2003 and then serving as its chairman for the past 3 1/2 years. He is also on the board of Directors for the San Gabriel Valley Water Association, Central Basin Water Association, Underground Service Alert for Southern California (do you call before you dig?) and serves on the professional advisory committee for Rio Hondo Junior College making recommendations for a new civil engineering technician program they are developing. He is also an alternate board member for the San Gabriel Valley Water Quality Authority and past chair of the Business Administration Division of the California-Nevada Section of the American Water Works Association. "Enter to Learn Go Forth to Serve". Sometimes he can even be found in his office doing real engineering work. So far, its been a wonderful, rewarding career.



Iraqi Water Conference

On July 26, 2005 nine men from Iraq landed in Salt Lake City and two weeks later a woman from Iraq joined them. They were specially selected engineers and geologists by UNESCO to come and gain training to help the Iraqi Water Ministry to build and sustain local capacity within water and water-related institutions at technical, institutional, legislative and managerial levels. The conference was hosted by BYU (Jim Nelson) and UNESCO. The conference was in Provo and lasted three weeks during which time they attended many classes and were taught by experts in the area of water. This included people from BYU faculty, CSU faculty, Bureau of Reclamation, Federal Highways Administration, Corps of Engineers, UDOT, UT Water Conservancy, and UNESCO. With these classes they were able to visit Jordanelle Dam, Snyderville wastewater treatment facility, and other engineering oriented areas. In the evenings and on weekends they were shown a little of the Western United States including SLC Olympic Park, Temple Square, Yellowstone Park, Sundance, and Snowbird.

Rugby meets CE

We have seen Civil Engineering students play on BYU's basketball, football, volleyball, and swim teams and now we can add rugby to the list.

Captian of the BYU rugby team, Salesi Sika keeps busy with practice, games, and his Civil Engineering courses. Salesi grew up in Tonga and was introduced to the country's favorite sport at the age of 12. He played in leagues growing up and has continued to the collegiate and professional level of play.

After attending BYU-Hawaii for a year, and serving a mission in Texas, Salesi came to BYU-Provo. He has been a part of the U.S. development team, traveling to Russia in August 2005 as well as going to Australia to play in the World Cup in October 2005.

Besides rugby, Salesi is balancing Civil Engineering courses with practices and games. Salesi is a Senior and is planning on graduating with his Bachelors in December 2006.



Dr. Travis Gerber research

Under a 3-year award from the National Science Foundation, Dr. Travis Gerber is studying the dynamic passive pressure of backfill soils surrounding foundations. The research is being conducted as part of the George E. Brown, Jr. Network for Earthquake Engineering Simulation (known as NEES). Created by the National Science Foundation, NEES is a shared national network of 15 experimental facilities intended to improve understanding of earthquakes and their effects. The research makes use of an eccentric-mass shaker from the NEES equipment site at UCLA together with two hydraulic actuators (i.e., loading rams) from BYU. In combination, the equipment is capable of producing 650 tons of force. By mounting the shaker and actuators to a full-scale pile cap, Dr. Gerber and his colleague in the department, Dr. Kyle Rollins, seek to



approximate loads associated with an earthquake. The dynamic passive pressure of the soil will be measured directly using traditional earth pressure cells and a relatively new tactile pressure sensing system consisting of a thin, flexible pad mounted to the face of the foundation.

The dynamic passive pressure of backfill soil is important because backfill soil helps prevent excessive horizontal

movement of the adjacent foundation. The amount of resistance provided by a backfill soil depends on many factors, including soil type, soil density, and the amount of foundation movement. Horizontal forces from earthquakes introduce other factors such as large, repetitive movements and high rates of loading. The effects of these factors on soil resistance are not well quantified. Using data from tests conducted by Gerber and Rollins, the resistance provided by various backfill soils under different magnitudes and rates of cyclic loading will be determined. By better defining the behavior of backfill soils under earthquake loadings, bridges and other important structures can be more reliably and/or economically designed. More information regarding this research project can be found at:
www.et.byu.edu/groups/neesr.

Department Wedding

Besides the usual student weddings, this year we had a staff member get married. Our Department Secretary, Tamera Shurtliff, married Matthew Seely on August 12th in the Idaho Falls Temple.



CIVIL TALK GOING ELECTRONIC

Would you like to receive the CE En alumni publication Civil Talk via email? If so please go to

www.et.byu.edu/ce

after selecting the submit email link, enter your name and email address and you will receive a .pdf version of Civil Talk via email.

From Bolivia to Provo - International Student Scholarship Program at work

Two years ago the CEEn department, with the support of the scholarship society initiated a program to provide assistance for Bachelors students educated in foreign (primarily developing) countries to complete a graduate degree at BYU. The goal of the program is to provide a high level education to these students, thus giving them greater opportunities to bless their individual lives and provide leadership in the church in their home countries. We began with three students: Oscar Monroy from Bolivia, Mario Cruz from Mexico and Ku Hyun Kwon from Korea. Oscar & Mario graduated in April and have accepted positions with Phelps Dodge mining company and CEMEX respectively. Kwon is continuing his research and will finish during this next year. We have been inspired by the stories of these faithful young engineers. The following excerpt from Oscar is representative of how they have come to us and been blessed by the opportunity to study here.

I grew up in La Paz, Bolivia. When I was five, North American missionaries knocked on my parent's door and shared their message which led to my parents joining the Church of Jesus Christ of Latter-day Saints. I was guided and educated with the sacred principles of the gospel and the good examples of my parents. At 19 I served a mission in the Cochabamba-Bolivia Mission, filling one of my biggest dreams.

After concluding an honorable mission and returning to La Paz, I worked for a year in various positions. My objective was to save some money in order to pay for university studies. After I saved enough to start with this new goal, I enrolled at the Technological

University of Bolivia in the Environmental and Natural Resources Engineering Department. In five years I graduated and could see that this new accomplished goal would give me some personal satisfaction and the essential tools to bless my family with the basic requirements to sustain my home.

Unfortunately, the bad economic situation in my country made finding a good job difficult. Thanks to Heavenly Father, during 2001 I found a good job in my chosen field in which I worked at until the beginning of 2003. At this time the situation in Bolivia became worse with several months of violent social confrontations which ensued on the streets resulting in a serious socio-political instability. Motivated by seeing lots of people suffering in the most severe poverty, without hope of a better future, and knowing that this circle of adversity was also effecting my own family, I decided to do something to help, anything, to change this situation.

Searching for advice from good friends and professionals I understood that getting a higher degree, MS or Ph.D, would give me more opportunities to progress and reach the goals I had in mind. Reaching this conclusion I immediately decided to apply for a Master of Science degree. After evaluating some advice from trusted and respected friends, I chose

to apply to BYU. I got all the necessary information; prepared everything, and acting on a particle of faith, I embarked on this new experience. I was accepted in the Civil & Environmental Master's program and started my studies in 2004.

Time has passed and the two years of the MS program have been completed, with me graduating in April 2006. I can look back just these few short years, and perceive the enormous change this opportunity has made in my life. Today I am a different man and I can sense the effect of the dedication of the professors, the great support of my advisor and the unconditional help of my classmates, has had on me. It has not only helped me to overcome all my weaknesses, but has transformed me into a more humble servant with the firm disposition to use my talents for the good of my neighbor. This is the primary benefit and blessing that will stay with me and is my pledge to put into practice in this world according to the will of God.

If you would like to contribute to our international student scholarships see page 7



Oscar receiving his Masters Degree

Dr. Kyle Rollins, all over the World

Dr. Rollins spent the month of April as a visiting professor at the Indian Institute of Technology in Madras (IIT-M) on the southeast coast of India. He was invited to fulfill this professorship by the Indian National Program for Earthquake Engineering Education (NPEEE). This program seeks to better educate engineers to the hazards posed by earthquakes so that the potential for damage can be reduced. Experts on earthquake engineering from throughout the world are invited to India to share their research findings with Indian engineers and develop ties with Indian researchers. Funding for the professorship was provided by NPEEE and a BYU Fulton College of Engineering Global Study Fellowship. The Indian Institutes of Technology are the premier schools for engineering education in India. Each year over 350,000 students take entrance exams hoping to obtain admission to one of the institutes which only have a combined total student body of about 35,000. As a result, the students are the best and brightest in India. Dr. Rollins presented lectures on lateral pile group behavior, pile foundations in liquefied soil, liquefaction mitigation strategies, earthquake ground response analysis, and passive force-deflection relationships for bridge abutments. Lectures were attended by faculty, students and practicing engineers. He also had the opportu-



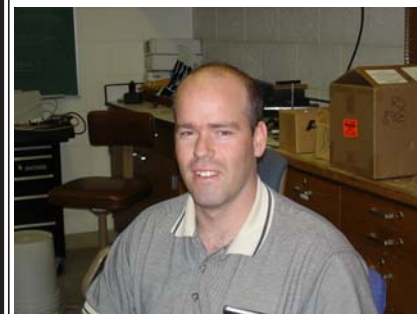
nity to meet individually with many of the graduate students and consult with them on their various research studies. In addition to lectures at IIT-M, he also presented lectures at the Indian Institute of Science in Bangalore and the Indian Institute of Technology in Delhi. Dr. Rollins is planning to cooperate with some of the Indian professors he met on future research studies and papers and looks forward to innovative and rewarding collaborations. Insights gained from his stay in India will be helpful to the college in planning curriculum changes to remain competitive in the evolving world engineering market.



Welcome Rodney Mayo

In June the Civil Engineering Department hired Rodney Mayo as an assistant lab technician to work with David Anderson.

Rodney and his wife Julie have four kids; Jaiden 7, Brandon 5, Megan 3, and Kevin 2 ½ months old and have lived in Payson since 1998. He has worked the last five years in the Heating Plant at BYU doing instrumentation and electronics. He enjoys the outdoors and most sports. Julie is a stay home mom and enjoys reading and occasionally playing soccer. Jaiden loves Gymnastics and reading. Brandon enjoys all sports, especially basketball and baseball. Megan loves to dress up and follow Jaiden and Brandon around. All three of them love having a new baby brother and thankfully haven't shown any signs of jealousy. Kevin has recently started sleeping through the night and has begun to smile. As a family they love spending time playing together. Rodney is very excited about his opportunity to work in the Civil and Environmental Engineering Department.



ASCE

ASCE has had an exciting Winter 2006 semester filled with activities. The climax of the semester was attending Rocky Mountain Conference in beautiful Rapid City, SD where students were able to see the fruition of their year long labors. Twenty-nine students attended for a much-needed break from their studies and conference preparations. The months leading up to this consisted of a flurry of concrete canoe construction, steel bridge building, paper presentation perfecting, and pre-design planning. The BYU team placed 4th overall for the conference and we were excited to have a hardworking group that actually made a bridge this year (and might I add, a pretty sleek looking one at that). The concrete canoe team did very well and placed in most of the races. Overall, the trip was one of team bonding. They left with everyone at the conference knowing that as a team we were exceptionally, and somewhat obnoxiously, supportive.

Other highlights included the completion of a resume CD as a new fundraiser (interested parties should contact Adam at adam_birdsall@yahoo.com), continued fantastic seminar speakers (want to come talk? contact Matt at madsero@byu.net), and a smashing closing social with a catered BBQ, volleyball, sailing, and canoeing (both plastic and concrete).

Goals for the semester included more involvement with the underclassmen, increased value of membership, and a united team at Rocky Mountain Conference. ASCE strives to continue to serve the students by providing opportunities of learning while having fun.

2006 Officers

President - Heather Burnham
1st VP - Matt Adsero
2nd VP - John Michener
Treasurer - Adam Birdsall
Secretary - Ben Reese
Publications - Shawn Stanley



Students who attended Rocky Mountain Conference.



Students visited Mt. Rushmore while at Rocky Mountain Conference.

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