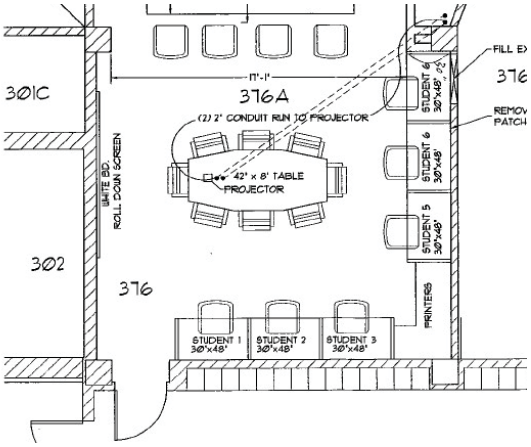
Civil Talk

Look inside and find out more about....

New Transportation Lab in 375

Several years ago, Dr. Saito initiated a dialog between BYU, UDOT, and the Engineering Office of the City of Provo to make connections among these organizations in order to receive traffic video and traffic data from these organizations to educate and train future transportation students. The opportunity to establish optical fiber connection among BYU, UDOT, and Provo City optical fiber network finally arrived last year when the School of Engineering and Technology selected the proposal for creating the BYU Transportation Lab prepared by Dr. Saito and Dr. Schultz for its large capital funding program. Not only the Dean's office provided funds for all the electronic equipment necessary for setting up the lab, but also they provided funds to remodel Room 376A CB (Do you remember where this room is located?) and turn it into the Transportation Lab.



The actual construction work started in April and the lab is scheduled to be completed by the end of June. The lab

cont. on p. 3

Department Acquires Research Boat

Reservoirs with seasonally or drought exposed sediment deltas, such as Lake Powell or Lake Mead, seem to have higher biological oxygen demand and nutrient loadings than can be attributed to inflow sources. The most likely source of these elevated loadings is re-suspended or re-worked sediments from the exposed sediment deltas. The processes that govern this loading, such as sediment nutrient levels, physical, chemical, and hydrological control, temporal patterns of flow and loading, and other potential issues are not well understood.

We are using Deer Creek reservoir, located near Brigham Young University, as a field laboratory to study these processes which exhibits these problems and provides an excellent study location. The Deer Creek reservoir inflow is largely governed by the operations of Jordanelle Dam, pro-

cont. on p 14

China Megastructures

After visiting China last year with the engineering college, Dr. Rick Balling felt it was only natural to launch a study abroad program so that civil engineering students could see the innovative structures that have been constructed in the last decade. This summer eighteen students were able to learn about the megastructures being built in China both in the classroom and in person.

cont. on p. 13

Brigham Young University
Department of Civil & Environmental Engineering Annual Newsletter
Summer 2008

Message from the Chair

Dear Alumni and Friends

It has been another great year in the Department of Civil and Environmental Engineering. Our students and faculty continue to bring distinction and recognition to our alma mater. The demand for our graduates remains extremely high with both graduating students receiving numerous job offers and undergraduates being sought after for summer internships.

Our ASCE student chapter was again recognized nationally by receiving the Region 8 Governor's award and as a finalist for the coveted Ridgeway Award.

I would like to give special recognition to our Scholarship Society. We are excited with the enthusiastic leadership Neil Anderson provides to this group and welcome new members, Lee Cammack, Dan Dixon, Jim Mullen and Brad Crane. I encourage you to generously support the activities of the Society. The endowed scholarship funds now stand at well over $2,250,000 (see page 4).

A few of the highlights of this year's activities are described on the pages of this issue of Civil Talk. The students and faculty are still abuzz about Professor Balling's Megastructures Study Abroad class just completed this Spring term. You will be inspired as well when you read their report in this newsletter (see page 1). Similarly, Professor Nelson's Study Abroad class to Mexico continues to grow in popularity and participation. Thirty-eight students had the opportunity to participate in these two global experiences and all enthusiastically indicate that they truly had a life changing experience. We are awaiting the completion of our new Transportation Laboratory. This new facility will provide direct computer and visual connection with transportation data both locally and nationally. It will provide a significant practice and research facility for our faculty and students (see page 1).

We have just completed the self study document required for our September visit and evaluation from the Accreditation Board for Engineering and Technology (ABET). Accreditation is a vital component of our program and we are pleased with how our curriculum and facilities align with the accreditation guidelines. Accreditation for Civil Engineering programs is becoming aligned with the Body of Knowledge (BOK) effort of ASCE. In keeping with this direction, we have just adopted a new department mission statement and accompanying program educational objectives. These statements are:

The mission of the Department of Civil and Environmental Engineering is to produce graduates who possess technical competence in their chosen specialty area of civil engineering, integrity, and a commitment to the principles of the gospel of Jesus Christ, that will prepare them to serve and contribute as innovators, professional engineers, and leaders in the global community

The program educational objectives of the Bachelors of Science Program in Civil Engineering at Brigham Young University are to:

1. Develop innovative engineers who competently apply recognized technical methods to meet human needs for water, shelter, and transportation.
2. Develop leaders with global awareness who hold paramount the safety, health and welfare of the public while sustaining and protecting the environment.
3. Develop citizens with moral character and commitment to the gospel of Jesus Christ who provide life-long service to the public, church, and professional community.

As always, the department welcomes your continued interest and support. Please feel free to come visit and provide us with information which 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

Saying Farewell

After 8 1/2 (almost 9) years Tamera Shurtliff Seely will be leaving the Civil & Environmental Engineering Department. She will be leaving to stay at home with her baby that is due in October. Tamera has enjoyed working at BYU and will miss the interaction with students, faculty, and alumni. She would love to keep in contact with alumni and so you can contact her at tshurtliff@yahoo.com.

How do you want to get Civil Talk?

Please let us know how you prefer to receive your edition of Civil Talk (via email, online, hardcopy). Visit the Civil Talk website at www.et.byu.edu/ce to get it sent via email.

Transportation Lab cont. from page 1

will look like a mini traffic operation center with a large monitor and four smaller monitors hung on the wall, all connected to the PCs at the control desk. The connection to the UDOT and Provo City fiber networks allows students to receive video and traffic data from their systems. The lab will also receive video feeds from the two traffic monitoring cameras, which will be installed at the intersection near the Hinckley Alumni & Visitors Center. The direction of these cameras can be manipulated remotely from the lab and students can not only monitor traffic at and near the intersection from the lab but also collect traffic flow data such as turning volumes and approach speeds. Another important part of this lab is the acquisition of a traffic data collection trailer that is equipped with Econolite's Autoscope Rackvision Terra video detection system and software. This trailer is equipped with a generator that will allow students to collect traffic data for many hours straight if necessary.

These features of the lab provide a tremendous opportunity for students to acquire skills for conducting traffic operations related research studies. Besides the equipment for a mini traffic operation center the lab will also contain desks for six students who will be working for traffic operations related research studies; it will also be equipped with a large meeting desk, a projector and a screen for research meetings.

Transportation is an important issue in Utah County as well as the state of Utah. BYU is a generator and attractor of a large number of trips in Utah County. As the population in Utah County grows, transportation congestion and air pollution will continue to pose serious questions to transportation engineers. There is a strong need to educate and train future transportation engineers. The BYU Transportation Lab will help us meet this need.

Faculty Awards

King Husein, Woodruff Miller, Steven Benzley

M. Brett Borup - Letter of Commendation for Advisor to BYU ASCE student chapter
W. Spencer Guthrie - 2007 CE En Outstanding Faculty Member
Rollin H. Hotchkiss - 2007 ESTC Outstanding Teacher; Editorial Board Member, ASCE Journal of Hydraulic Engineering; Treasurer and Member of Governing Board, EWRI
David W. Jensen - Technical Director, AIAA Structures, Design & Test Group; Chair, Central Utah Branch, ASCE
A. Woodruff Miller - King and Dianne Husein Professorship
E. James Nelson - College Global Awareness Fellow
Kyle M. Rollins - Editorial Board Member of ASCE Journal of Geotechnical & Geoenvironmental Engineering
Grant G. Shultz - 2007 Transportation System Policy, Planning and Process Section Best paper Award

Student Awards

Matt Adsero - $3,000 Scholarship - International Association of Foundation Drilling (one of twelve nationally)
Charles Allen - 2nd Place Student Paper Competition, ITE Utah Chapter; $1,000 Scholarship from ITE Utah Chapter
Kordel Braley - 2nd Place Student Paper Competition, ITE Inter-mountain Section
Aaron Cook - 1st Place Student Paper Competition, ITE Utah Chapter
Oliver Obregon - Graduate Fellowship from CONACYT (Mexico's NSF), tuition plus $1,000/month
Ben Reese - $20,000 research award from Portland Cement Association 2007
Paul Dixon - $20,000 research award from Portland Cement Assiciation 2008
Bradford Singley (with Rollin Hotchkiss) - Best Paper, Rocky Mountain Division and Region IV, ASEE; Nominated for Best Paper, National ASEE
Paul Dixon, Wendy Thompson, Maile Rogers & Sy Winkelman - $1,000 Scholarship each from ACI

Message from the Scholarship Society

Greetings from the Department of Civil and Environmental Engineering Scholarship Society Board of Directors at Brigham Young University. We have just published a book containing a history of the department and biographies of all of the professors who have taught Civil and Environmental Engineering at BYU. Our thanks goes to Fred Nelson ('72) and Steve Miller ('80), as well as the Civil Engineering Secretaries, who worked tirelessly to put this together. We felt that it would be interesting and enlightening to read about the accomplishments of those from whom we have learned. As we passed through the Fulton College of Engineering and Technology, we may not have been aware of the effort and sometimes personal sacrifice given by many that made the engineering department a reality. A rich heritage has been established by the dedication of the professors and this is your chance to read their stories and to be inspired as we have been inspired.

We are grateful for our education and experience gained at BYU. As you read through the book, it may remind you (with a twinge of nostalgia), as it did us, of your time there. As a Committeee, we are endeavoring to create a sense of attachment to the department for the benefit of those who follow. As alumni, you benefitted from the quality of the department and some of you directly from the work of the Scholarship Society. We are pleased with the progress we have made as a Scholarship Society since its creation in 1992. Our current endowment fund of $2,250,000 provides nearly $215,000 in scholarships to our graduate and undergraduate studentst each year. As the Scholarship Society Board of Directors, we have three goals that guide our work:

1. Raise funds to ease the financial burden of those who come after us and enhance their educational expereince.
2. Help elevate the quality of the Department.
3. Graduate as many LDS engineers as possible.

At this time we are asking you to strengthen your commitment to the Department and help us accomplish these goals by making any contribution you can to the Civil Engineering Scholarship Fund. Go to the BYU Fulton College of Engineering and Technology website, http://www.et.byu.edu/ce, click on the "Give to the Department" link). If every engineer that has graduated from Civil Engineering at BYU donated $100 or more a year to the scholarship fund, we would have upwards of $200,000 more per year to help accomplish these goals. In appreciation, donors will receive a copy of the book containing a history of the department.

Neil O. Anderson, President

Save the Date

It is tentatively planned to once again host an ASCE/Scholarship Society homecoming tailgate party. Mark your calander for October 11th when BYU will take on New Mexico at 4:00 p.m. in the Homecoming Football game. Watch the Civil Engineering Department website www.et.byu.edu/ce for more details as we get closer to the date.

New Scholarships

The Jerry & Bertha Christiansen Scholarship (Dr. Hank Christiansen's grandparents) is a three semesters of graduate tuition scholarship awarded to undergraduates who will be continuing on at BYU to receive their Masters.

Dr. Don Budge has endowed a scholarship as well. The W. Don & Kaye M. Scholarship is one years tuition awarded to a Jr. or Sr. who is active in ASCE.

In addition to the James L. Keller & Associates and the Wright Engineers annual scholarships, we have three additional annual scholarships that will be given out this year. The ES2, Washington Group Intnational, and the Wayne Y. Lee annual scholarships will be given this fall to deserving graduate and undergraduate students.

Thank you to all those who donate to our scholarship program.

Dr. Miller takes sabbatical leave to Arabia

After 6 years as Department Chair, Dr. Woodruff Miller took a well deserved sabbatical leave from August 2006 to July 2007 at the American University of Sharjah (AUS) in the United Arab Emirates (UAE). AUS is in the city of Sharjah, UAE, which is the close neighbor city to world famous Dubai, UAE (like Orem and Provo). Modern Sharjah is a major center of learning and the arts as confirmed by the designation in 1998 by UNESCO as the Cultural Capital of the Arab World. Dr. Miller was a Visiting Faculty Fellow Professor in the Civil Engineering Department in the School of Engineering at AUS. Dr. Miller's wife, Susan, also taught at the university, in the Department of Writing Studies in the College of Arts and Sciences.

Dr. Miller was busy teaching 4 classes each semester and 2 classes summer term about civil engineering topics including statics, fluid mechanics, hydraulics and environmental engineering. He also served on committees utilizing his years of experience as CEEn Chair and Graduate Coordinator. The AUS CE faculty asked Dr. Miller to assist them with recruiting, interviewing and hiring of new faculty for their fast growing department. The School of Engineering had Dr. Miller evaluate faculty who were up for advancement in rank. He also helped with development and establishment of a new Faculty Center at AUS. Dr. Miller conducted limited research at AUS on evaporation and climate change in UAE with former BYU student and current AUS CE faculty member Dr. Isaac Waite.

The American University of Sharjah is fairly young and small, but the most prestigious university in the Gulf region. It was established in 1997 by and is presided over by His Highness Sheikh Dr. Sultan Bin Mohammed Al Qassimi, Member of Supreme Council & Ruler of Sharjah. When referring to the university president, you must use the whole title. AUS has achieved preeminence as a coeducation institution based on an American model and grounded in the history and culture of the Arab Gulf region. Tuition is about $13,000 per academic year. AUS has 5000 students, with about 2000 in Engineering and 500 in Civil Engineering. All engineering faculty have PhD's from US or UK universities. The Engineering School at AUS is the only one in the Gulf region which is ABET accredited. AUS has a student body which boasts some 75 different nationalities.

The campus is a beautifully landscaped green garden, as opposed to the surrounding desert, which is watered day and night with desalinated sea water from the nearby Arabian (Persian) Gulf. About 90% of the water supply in the UAE is desalinated sea water including the drinking water, but most people drink bottled water.

Wood and Susan learned a lot about the local culture and religion and were surprised that in Sharjah and Dubai the density of mosques is almost as high as the density of chapels in Provo and Orem. There are two LDS church units in Sharjah and Dubai where members are allowed to meet together, but are not allowed to do missionary work. There are a few American and Canadian LDS members, but the majority of the members are Filipinos.

One of the purposes of Dr. Miller's leave was to visit Civil Engineering Departments at Universities in the mid-eastern part of the world. While on his sabbatical, Dr. Miller met with chairs and faculty members from 10 different mid-east CE departments. As well as AUS, he also visited the University of Qatar, Sultan Qaboos University, UAE University in Al Ain, University of Bahrain, University of Jordan, Yildiz Technical University (Istanbul), Istanbul Technical University, University of Cyprus, and National Technical University (Athens). They discussed teaching, curriculum, laboratories, administration, research, exchanges of faculty and students, and many other issues of common interest.

Wood and Susan Miller also attended a Water Resources Engineering Conference in New Delhi, India, met family members twice in Jerusalem, Israel, and went on a safari in Kenya, Africa while on their sabbatical leave in Arabia.

Dr. Gerber's Mechanically Stabilized Earth Wall Research

Dr. Travis Gerber is currently concluding a study of Mechanically Stabilized Earth (MSE) walls for the Utah Department of Transportation (UDOT). Unlike conventional reinforced concrete retaining walls, MSE walls have elements such as metallic strips or geosynthetic fabrics embedded horizontally within the soil mass behind the wall face. These elements are relatively closely spaced and cause the soil to behave more as a solid block. This research, conducted collaboratively with a similar group from

Utah State University (USU), documents the current performance of UDOT's MSE walls as observed during site visits, identifies occurrences of adverse performance, studies the causal mechanisms for distress, and provides measures to prevent potential under-performance in the future.

In many ways, MSE walls are structures that are similar to more noticeable bridges and overpasses – they have limited life spans which require some level of inspection to assess their condition and assure their serviceability. Because limited funding precludes the implementation of a comprehensive inspection program for all of the MSE walls in UDOT's wall inventory, Dr. Gerber and members of an expert panel performed a risk assessment involving a probabilistic failure modes analysis for the walls. This analysis helps identify those walls in UDOT's inventory which have the greatest need for monitoring and helps target the use of limited funds. The results of the analysis should also help UDOT anticipate problems before they become severe and contribute to the development of hazard mitigation strategies.

MSE wall located in Provo Canyon

Showing placement and compaction of backfill in front of pile cap prior to testing; eccentric mass shaker is located on the top of the pile cap.

In addition to his study of MSE walls, Dr. Gerber is completing a study of the dynamic passive pressure of backfill soils surrounding foundations. The research, a multi-year effort funded by the National Science Foundation as part of the George E. Brown, Jr. Network for Earthquake Engineering Simulation (known as NEES), uses of an eccentric-mass shaker together with two hydraulic actuators (i.e., loading rams) to approximate loads associated with an earthquake. In combination, the equipment is capable of producing 650 tons of force. With department colleague, Dr. Kyle Rollins, the research group has conducted 15 tests on 2 full-sized pile caps. Using data from tests, the resistance provided by various backfill soils and backfill configurations has been determined for different magnitudes and rates of cyclic loading, thus providing for more reliably and/or economically designed foundations.

Dr. Gerber during a wall inspection visit

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 your classmates can know what you are doing. 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(___)_____
Email 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.** Mark if you would like this included in the next Civil Talk ☐ Yes ☐ No

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

Civil Talk
Brigham Young University
Civil & Environmental Engineering
368 Clyde Building
Provo, UT 84602-4081

Scholarship Society Annual Alumni Fish (& Chicken) Fry

Don't miss this chance to celebrate and reunite with old BYU friends. Come to the Civil & Environmental Engineering Scholarship Society Alumni Homecoming Reunion.

When: Friday, October 10, 2008
Where: Clyde Building Student Lounge
Time: Social Hour 5:00 p.m. - 5:30 p.m.
Dinner & Program 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 that evening.

Please RSVP the information listed below in one of the following ways. (1) mail this form to BYU Civil Engineering, Fish Fry, 368 Clyde Building, Provo, UT 84602 (2) call (801) 422-2811 (3) online at www.et.byu.edu/ce and click on the link for CE Homecoming Fish Fry (4) by email civil@byu.edu

Name: Last _____ First _____ M.I. _____
Address: _____
Is this a new address? _____
City/State/Zip: _____
Email _____
Phone: wk _____ hm _____ cell _____
Coming to Annual Fish Fry: No. Attending Adults _____ Children _____

Please RSVP by Friday, October 3, 2008

BYU Civil & Environmental Engineering Scholarship Donations

Please direct my gift to College Annual Fund: 30120438

Please Print:

Name _____ Date _____
Address: _____
City/State/Zip: _____
Phone: _____ Fax _____ Email _____

Select Payment Method:

☐ $2,500 ☐ $1,000 ☐ $300 ☐ $120 ☐ $50 ☐ $25 ☐ $ Other _____
☐ Cash ☐ Checks payable to BYU - *Please put BYU only on the 'pay to the order of' line with nothing on the notation line*
☐ Alumni ☐ Friends of BYU

You may also donate via credit card by visiting our department website, www.et.byu.edu/ce and click on the "Donate to the Department" link.

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

Scholarship Society
Brigham Young University
Civil & Environmental Engineering
368 Clyde Building
Provo, UT 84602-4081

Scholarship Society Conference - October 2008

PE Refresher, Professional Development, Technical Projects

The first annual Life-Long Learning Conference hosted by the Scholarship Society Board of Directors of the Brigham Young University Department of Civil and Environmental Engineering will be held during Homecoming Week, October 8 - October 11, 2008. This conference is specifically intended to reach out to BYU alumni to renew acquaintances, provide networking opportunities, and to reconnect with former classmates and the Department of Civil and Environmental Engineering (CEEn) staff. All proceeds from this conference will go to the CEEn Scholarship Society Endowment that is dedicated to supporting engineering students attending Brigham Young University.

The Conference program is specifically designed to provide immediately applicable technical and professional information for engineers at all levels by offering three concurrent programs (tracks) for attendees to choose from. Track 1 is an abbreviated PE Refresher course that will review the basics of each of the major areas included in the PE Exam. The timing of this refresher will be perfect - just a couple of weeks prior to the exam. Track 2 will be a Management program that will focus on subjects applicable to project managers, principals, and current/future owners of engineering companies. Track 3 is a Technical program that is focused on state-of-the-practice topics applicable to a wide range of engineering projects and will be taught primarily by current BYU CEEn professors. Attendees who participate fully in the Life-Long Conference will earn up to 15.5 professional development hours.

Anyone interested in the professional development sessions is welcome to attend. Whether you are a recent graduate or the manager of a large engineering firm, this conference covers a wide spectrum of topics that can help you in your profession and provide opportunities to network with your peers. All alumni are especially encouraged to attend!

Detailed conference information and on-line registration is available at:

www.et.byu.edu/ce

or you may contact:

civil@byu.edu

(801) 422-2811

This conference is also an excellent opportunity to show your support for Brigham Young University's Department of Civil and Environmental Engineering and with more than 200 participants anticipated, sponsorship will provide valuable exposure for your firm. For sponsorship opportunities, visit our website www.et.byu.edu/ce, call (801) 422-2811, or email civil@byu.edu.

Steve K. Noble, Conference Chair

Dr. Durrant Addresses Graduates at Convocation

Dr. S. Olani Durramt gave the principle address to the August graduates at the Ira A. Fulton College of Engineering and Technology Convocation on August 15, 2008 in the Smith Fieldhouse.

He gave a great address speaking to the graduates about continuing to learn and to seek and follow the guideance of the Holy Spirit. He told of his experiences through his education and career and what he had learned. He said "Now, I don't mind being called a 'nerd'. I like that title. I worked hard for it. I deserve it. But, I don't like to be accused of nerdishness."

His final words of advice were "We can't decide in advance all we are meant to do in this life. We can make plans, and we should, but we don't know where events and the Spirit of the Lord will take us. In my experience, one plans in advance only a few of life's milestones. All others come as a result of unanticipated opportunities. The key, as President Monson noted, is to be prepared to take advantage of these opportunities." He concluded with "So, as you are handed your diploma in a few minutes, you will receive your ticket to the world. Use it, expand upon it, and enjoy your career. Diligently seek and follow the Holy Spirit in all you do. Devote yourself to your family. Serve your Church. Be an asset to your community. Read broadly and study deeply. Then, as Elder Richard G. Scott promised in a recent BYU devotional; with a proper partnership of secular knowledge and divine truth, "Your potential is unlimited"!"

ASCE Student Chapter Report

The school year started off with the ASCE opening social. This activity was a blast for everyone who came. It was held out at Utah Lake where they were able to grill hamburgers, play volleyball, and race canoes. They even brought out the "Defyant" the award winning canoe from the previous year.

At Homecoming ASCE hosted a tailgate fundraiser. This activity was designed to produce revenue for the student chapter. A BBQ was set up outside the Clyde building with activities in the stepdown lounge as well.

Students as well as BYU alumni were invited to come and eat, get their face painted, play concrete bowling and mingle with each other. Several generous donations were made and the chapter raised an impressive $1500.
The Chapter also entered a float in the Homecoming parade. They built a rotating table on which they put the "Defyant" and manually spun it as students cooled off the crowd with home made water guns. It was a big hit! The float won the Dean's award for "Best Department Float".

Rocky Mountain Conference was held in Golden Colorado which is about an eight hour drive from Provo.

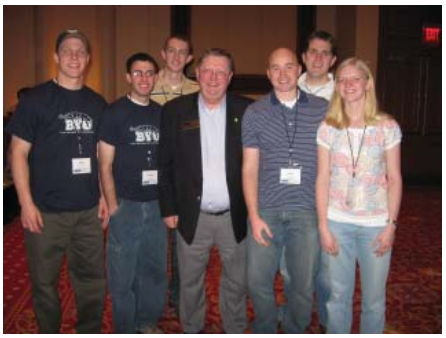
The student chapter participated in the concrete canoe, steel bridge, "canstruction" (structure design using canned food which was later donated to food banks), mystery design (retaining wall), predesign (surveying), technical paper, and non-technical paper competitions. BYU placed 4th overall out of the thirteen schools that competed. It was a lot of fun for every student that went. Next year BYU will be hosting Rocky Mountain Conference (April 3-4, 2009) and will need help from local engineers. If you are interested in participating please send an email to Grant Farnsworth at g.d.farnsworth@gmail.com.

Of course ASCE is always involved in local service opportunities. This year they did a design squad outreach in which BYU students donated their time to go to different elementary and middle schools in the area to teach kids about engineering. Habitat for Humanity was helped by ASCE students. As usual the CE Dept. hosted the balsa wood bridge breaking at area high schools from Salt Lake to South Sevier. ASCE students helped prepare the balsa bridge kits for high school students to use in their annual competition and then helped Dave Anderson destroy the bridges. Over eighty people donated their time logging over 180 hours of service.

As well as service, there were some fun field trips this year. There were tours of the Tanner building addition a couple of times, visits to the retaining wall for the new parking garage by the Tanner building, a Salt Lake soccer stadium field trip, and an Intermountain Lift tour.

We look forward to another year of service, activities, and fun times.

2007-2008 Officers
President - Adam Homewood
1st VP - Pat Stephens
2nd VP - Jeremy Dye
Secretary - Trevor Hawkes
Treasurer - Cody Kreitel
Publications - Lisa Larsen



ASCE Officers at Leadership Conference

Rocky Mountain Conference Help Needed!

The BYU ASCE Student Chapter will be hosting Rocky Mountain Conference April 3-4, 2009. We will need help from local engineers. If you are interested, please email Grant Farnsworth at g.d.farnsworth@gmail.com

MegaStructures Study Abroad - China

Continued from p 1

Prior to the trip, each student was assigned a specific structure and bridge in China. They did the research and then presented to their classmates on conceptual designs, analysis calculations and the societal impact of their subjects. As well as learning about structural engineering they also learned about the people, culture, history, and language of China with the intent that students consider their place in the global economy by interacting with engineers and families that live and work internationally.

Group in Shanghai

Dr. Balling, along with Dr. David Jensen and Dr. Paul Richards, accompanied the students for the two week study abroad trip which catered to upper-division undergrads and graduate students in the CE program.

The students were able to visit five major cities in China including Beijing, Yichang, Shanghai, Shenzhen, and Hong Kong. In these cities they were able to see engineering feats, tourist attractions, and the natural beauty of China.

They started out in Beijing and were able to drive by the Olympic buildings, tour a terminal at the Beijing airport, visit Tiananmen Square, the Forbidden City, ARUP Engineering office, World Trade Center, and CCTV Building (Twisted Donut). Of course, they had to visit the Great Wall of China and the Ming Tombs. One evening they were able to go to the symphony at the National Grand Theater (Bird's Egg).

Olympian Housing

In Yichang, they were able to take a speedboat ride through the Xiling Gorge and a Sampan boat ride on Shennong Stream. They also viewed the Badong, Xiling, and Yiling bridges as well as the Three Gorges Dam.

Their next stop was Shanghai where they walked the Nanjing Road, visited the Pedestrian Tunnel to the Pudong and, of course, took in the skyscrapers – the Oriental Pearl, Jin Mao and the World Financial Center Towers. They took a bus tour of the Shanghai bridges, namely Zupu, Lupu, Nanpu, and Yangpu. They attended church while there and visited with the Zollinger family, a family from Logan working and living in China.

On their way to Hong Kong, they took in some of the sites at Shenzhen including the HK-SWC, Tsing Ma, Ting Kau, and Kap Shui Mun bridges. In Hong Kong they visited the large buildings of 2IFC, the Center, BOC, Central Plaza, and Cheung Kong. They toured the ICC Building with Arup Engineers and toured the Stonecutters Bridge site with the Highway Dept. The trip to Hong Kong also included a session at the Hong Kong Temple.

Left & above: CCTV building, Beijing

Senior Rob Marsh said it best, "Schooling is often limited to knowledge found in books or discovered in labs. Our trip to China didn't just school us; it educated us. In China, we saw a society that knows how to dream . . . and for two weeks, we became a part of it."

Gearing up for ABET

Every six years, the undergraduate degree in Civil Engineering must be re-accredited by the national organization known as Accreditation Board for Engineering and Technology (ABET). During the year 2008, the B.S. degree in Civil Engineering is up for re-accreditation. From January to June the department prepared a self-study report that was sent to ABET. This report describes the educational objectives, the program outcomes, the assessment tools, the courses, the facilities, the students, and the faculty along with an evaluation of the undergraduate program based on assessment data. All of the faculty contributed to the report, which was drafted primarily by professors Balling, Benzley, and Guthrie. Major contributions were also made by our secretary, Tamera Seely, and our technician, David Anderson. A visit by ABET evaluators from other universities will occur in either September or October, who will then prepare their final evaluation by the end of the year.

Cont. from page 1

viding excellent flow records and the ability to develop field experiments that require prior knowledge of reservoir inflows. In addition to using Deer Creek reservoir as a functional field laboratory to study these processes, Deer Creek is the primary water supply for the Utah County and addressing these problems would provide a significant benefit.

The knowledge gained from this study can be transferred to other intermountain west reservoirs and reservoirs in developing and developed countries. As part of this long-term study, the methods and approaches developed at Deer Creek reservoir will be applied to medium sized mountain west reservoirs such as Echo and Rockport, to large reservoirs, such as Lake Powell, and to various sized reservoirs in Mexico such as Aguamilpa and others. These extended studies will be done through BYU on-going research programs with the Bureau of Reclamation (BOR), the Central Utah Water Conservancy District, the Provo Watershed Users Council, and existing research and educational partnerships in Mexico.

BYU Students taking sediment samples to analyze for phosphorous and other nutrients.

Acquiring water quality data using the HACH hydrolab.

This study is a combined effort of Dr. Williams in water and geochemistry, Dr. Nelson in advanced reservoir modeling, Dr. Borup in laboratory analysis and water treatment, Dr. Hotchkiss in reservoir sedimentation and stream restoration, and Dr. Miller in environmental water quality in lakes and reservoirs, each contributing areas of expertise. This research is supported by several new instruments including a HACH hydrolab, a high-resolution laboratory spectrometer, a liquid chromatography machine, and a field sampling effort supported on the new Civil Engineering boat. The boat is being modified by David Anderson and Rodney Mayo to support field data collection and reservoir monitoring.

Civil Engineering Faculty 2007

Back Row (LtoR): Spencer Guthrie, Gus Williams, Grant Schultz, David Jensen, Norm Jones, Rick Balling; Middle Row (LtoR): Jim Nelson, Brett Borup, Kyle Rollins, Rollin Hotchkiss, Fernando Fonseca, Paul Richards; Front Row (LtoR): Mitsuru Saito, Wood Miller, Hank Christiansen, Steven Benzley, Travis Gerber.

Alumni Updates

Jarom Feriante '00

Over the last few years, Jarom has been putting together a design build company that focuses on new construction methods to offer longer lasting, higher performance homes and buildings. Lately he's specialized in the use of thin shell concrete structures insulated with closed cell polyurathane foam. Doing something new in the construction and design industry has its challenges. Obtaining approvals from city building departments has been easier than he expected. Constructing unconventionally is the most challenging aspect of his work. They've had to hire their own employees to do most of the structural work since subcontractors in the area don't have much experience with their methods. The spanish language Jarom picked up on his mission to Chile has become useful for communication with field personnel. Lastly, on a family related note, Jarom, and his wife Cassandra, are happy to announce the birth of their first child, Michael, who is now 16 months old.

J. Kirk McLaughlin '83

Kirk was recently promoted to Senior Manager, overseeing a group of 30 engineers that provide direct factory support to the Joint Strike Fighter (JSF) development. As this advanced military jet gets built and mechanics encounter engineering problems, his team is called and responds with quick resolutions to aircraft engineering problems. It is high pressure at times, but it is always fun. His team provides 24/7 support to the aircraft production floor. In addition, Kirk is currently working on an MBA degree. His daughter Ashley, attends BYU and graduated in April 2008 with a degree in Speech Pathology. His son Brandon, graduated with an associates degree in Civil/Mechanical Engineering, from Utah Valley State University in Orem, in April 2008. He plans to continue on for his BSME at either BYU or University of Utah. Finally, Kirk's step-son Matthew is a high school sophomore majoring in hi jinx. Kirk's wife Darlene, is a successful real estate agent in the Dallas/Fort Worth metroplex and they reside in Keller, Texas, about 15 miles north of downtown Forth Worth.

McLaughlin cont.

Satyendra Gupta '72

Satyendra was chairman of CE dept at Birla Institute of Technology & Science, Pilani, Rajasthan from 1999-2003 after his return from AIT, Bangkok. In 2003 ICFAI Univ asked him to set up an engineering college at Jaipur, Rajsthan for undergraduate study. He left BITS and joined ICFAI University as a Director and set up the Engineering Institute at Jaipur, Rajsthan. In 2007 the first batch of students graduated with B.Tech. degrees and all were placed. In Sept 2003 the University asked him to shift to Tripura (NE India) to take charge at the ICFAI Univ at Agartala, Tripura and he went to Tripura. His job is to look after the work of the whole institute and Univ. as an administrator. It requires faculty development, lab setting, curriculum development and overall development of the university academically. Satyendra has published about 108 research papers, guided 50 graduate students, and was co-chairman for three Ph.D. students. He has received 17 plaques of appreciation for professional work and several awards. Satyenda has two daughters, one has a BS and MS from BYU CE En and another holds a doctorate from AIT, Bangkok. Both are married and are staying in the USA. His son has a Ph. D. in Computer Eng. from Princeton Univ. and is currently an Asst Professor at Villenova Univ, Pennsylvania. At this time he lives with his wife in Agartala, Tripura, India.

Gerald Blumell '74

After working in western Canada for 20 years, Gerald decided to adventure to Alaska and has been working on a variety of projects for the past 14 years. While in Canada he focused on water and waste water for cities and pulp mills. Now his work is more varied, from water and sewer systems for Alaskan villages to municipal water projects in the larger centers. Another interesting project is the new hospital in Barrow, the northern most point in the US. He is enjoying his life there. His only daughter just left home this year to attend college in Logan, Utah, and his wife has a piano studio in Anchorage.

Christopher Beers '94

Christopher has done consulting work in various locations and it has been interesting to adapt to rules, regulations, government agencies, and technical challenges in ID, CA, UT, IN, KY & FL. He has worked in the field and office on almost all projects and found that nothing beats hands on experience. He is or had done survey, CAD, modeling, engineering, administration, construction management, marketing, business development, office management, and strategic business planning. He take projects from concept to as-built. He has been around some incredible engineers in his time (learn all you can from the experienced people you get around) and worked on amazing projects all over the country and is even doing one now on the Turks & Caicos Island in the Carribean. When money is not a constraint, it is amazing what can happen. Christopher has a PE license in 4 states, a PLS in KY and just sat for the Florida Essay test. He has participated in his 6th class of Leadership PE in the state of Kentucky and he is always active in ASCE & NSPE. He earned his MBA after 9 years in the field and it has opened many opportunities for him.

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