Student Announcements

Career Fair on February 7th!
The Spring 2013 Career Fair will be held on Thursday, February 7th from 11AM – 4PM in the Surbeck Center Ballroom/South Lounge. There are over 30 companies looking for civil and environmental engineering students interested in summer internships, co-op’s, and full-time positions. Please reference the Career Website to see the complete list of registered companies.

RESPEC Invests in Undergraduate Research at SDSM&T
RESPEC Consulting & Services recently committed to donating $250,000 over the next five years to SDSM&T. The established RESPEC Undergraduate Research Grant Program will provide research opportunities for undergraduates in all departments. In 1969, RESPEC was founded in Rapid City by five SDSM&T professors. Now RESPEC has eight other offices throughout the United States with annual revenues of over $25 million. It is an acclaimed national leader in mining and energy, water and natural resources, and information technologies. Currently, 33 alumni are employed by RESPEC.

CEE Graduate Seminars
All seminars are in the Classroom Building, room CB 204W at 4:00 pm unless otherwise noted. Check for updates at http://cee.sdsmt.edu. Everyone in the department welcome and encouraged to these seminar presentations!

Three civil engineering graduate students who are studying water resources travelled to Haiti in July, 2012. They investigated existing water supply systems near Verrettes in the Artibonite Valley for integrity and potability, with a focus on bacterial presence testing. They plan to return to Haiti to implement water supply improvements and continue investigations.


2/27: David M. Campbell, P.E., CEO and Founding Principal with Geiger Engineers will give two presentations. Topic: "Long-Span Steel Roof Structures." Time and Location: 11:00-12:00, CB 206E and W. Mr. Campbell will discuss design of long-span roof structures using structural steel and structural steel with steel cables. Various structural systems will be presented employing projects as examples. Systems presented will include, spatial trusses, cable stayed roofs, tensegrity-type domes and cable trusses. PDH certificate upon request.
Topic: "Leadership of Professional Practice." Time and Location: 4:00-4:50, CB 204W.
Mr. Campbell will discuss his experience in management of a small special structures engineering practice. Topics will include marketing, agreements and fees, project management, insurance, and risk management.

3/1: 49th Annual Concrete Conference - Concrete Project Management, Surbeck Center Ballroom.
The regular registration is $135, registration for students and retirees is $25. Attendees may e-mail Dr. M.R. Hansen (mr.hansen@sdsmt.edu) and pay the day of the conference. NOTE CEE graduate students may elect to attend the Concrete Conference or the Western South Dakota Hydrology Conference to meet their seminar requirements for spring 2013. PDH certificate upon request.

3/13: Dr. Jack (John) N. Saddler, Professor, Dean Emeritus, Forestry University of British Columbia.

Continued global insecurity around oil supplies has helped keep oil prices volatile and relatively high, influencing the ongoing and significant investment in both conventional (sugar, starch, plant, and animal-oil-derived ethanol and diesel) and advanced (biomass-derived or ‘drop-in’ like) biofuels and chemicals. It is likely that ‘pioneer’ advanced biofuel plants will first use biomass residues, such as wood pellets, as their initial feedstock as it is currently difficult to justify the investment in energy crops when there is no clear market for their use. The biorefinery concept has been proposed as a means to extract maximum value from lignocellulosic materials, with the higher value physical/chemical components used for biomaterials and chemicals and whatever is left used for bioenergy/biofuel production. The continued development of new conversion technologies has encouraged these nascent, newer biorefineries to assess a range of lignocellulosic feedstocks with the hope of producing additional value-added bioproducts and more efficient recovery of bioenergy.

3/27: Gerry Houlahan, P.E., Vice President of Moffatt & Nichol.
Moffat & Nichol is a leading global infrastructure advisor specializing in the planning and design of facilities that shape coastlines, harbors and rivers as well as an innovator in the transportation complexities associated with the movement of freight. Topic: "Offshore Wind Power – A Foundation Perspective." PDH certificate upon request.

4/18: Western South Dakota Hydrology Conference at the Rushmore Plaza Civic Center.
Free for students. Register at the conference website.

Curriculum Notes

CEE Curriculum Changes for 2013-2014
To help students better prepare for the FE exam, CEE 463 (Concepts of Professional Practice) will be offered fall semesters starting Fall 2013, and the course will include FE preparation activities during the first half of the semester. CEE 474 (Construction Engineering and Management) will also be moving, and will be offered spring semesters starting Spring 2014. If you are planning to graduate in Fall 2013, please check with your advisor ASAP to see if this will affect your graduation plans. For your reference, the new curriculum flow charts are shown below.

[Image: 2013 BSCE flowchart
CE emphasis 11-15-1]
[Image: 2013 BSCE flowchart
EnvE emphasis 11-15]
Student News

ASCE Student Chapter Received Academic Excellence Award
The American Society of Civil Engineers (ASCE) student chapter received the South Dakota Board of Regents Award for Academic Excellence on December 12, 2012. The ASCE student chapter promotes professional development by hosting academic speakers, the bi-annual Surveying Conference, and the annual Concrete Conference. Each of these activities provides continuing education for both students and professionals in the field. The chapter has also held test review sessions to prepare students to study for and pass the Fundamentals of Engineering (FE) exam. Raising academic standards is a top goal for members of this chapter.

CEE Undergraduate Research Assistantship Awards
As part of the Civil and Environmental Engineering departments’ initiative to encourage undergraduate research, two students selected from a pool of qualified applicants were awarded research assistantships. Tyler Adams, a junior from Newell, South Dakota, will be working with Dr. Robinson to investigate the shear response of concrete-filled fiber reinforced polymer (FRP) tubes and Aditya Chivukula, a junior from Hyderabad, India, will be working with Dr. Christopher on the enzymatic stabilization of soils. Congratulations to Tyler and Aditya and thank you to all those students who applied for the undergraduate research program.

ASCE Student Chapter News
Right before the new semester started our ASCE student chapter sent our six new officers to Milwaukee for a leadership workshop to help improve our chapter. After that it didn't take us long to get back in the swing of things. We are preparing to go to regionals in Logan, Utah the first weekend of April. We have been working at the Rapid City Civic Center during the Stock Show and Rodeo for a fundraiser and will be returning there to work again the 1st and 2nd of February. Our next general meeting will be January 30th at 4pm in the CB 204W where we will be talking about regionals and getting the chapter ready for the upcoming concrete canoe pour day and chapter fundraisers. For more information on ASCE Student Activities, please email the ASCE Student Chapter.

Steel Bridge Update
The bridge materials arrived a few days ago and we have begun fabrication. As of now, we are looking to be done with construction and load testing the bridge before spring break comes around. In the meantime, we will
be displaying our old bridge at the Rushmore Mall January 26th and 27th. For more information on Steel Bridge Events, please email Chris Timm, Steel Bridge Co-Captain.

**Concrete Canoe Update**

After the holiday break, the concrete canoe team has gotten very busy. Things we have been doing include selecting reinforcement for the canoe, receiving the foam mold from Ohio, weighing out aggregate for pour day, and starting our paddlers out on a workout program to get them in shape for competition. One important date to note is the anticipated pour day will be Saturday, February 2nd. We are very excited for how the design will turn out and look forward to the upcoming months of canoeing! For more information about Concrete Canoes Events, please email Ben Wolf.

**Scholarships, Research Opportunities, and Fellowships**

**Bill Craig Scholarship**
The South Dakota Engineering Society Black Hills Chapter is sponsoring the Bill Craig Scholarship. This year, one $2,000 scholarship will be awarded to one returning SDSM&T engineering student for the Fall 2013 semester. This is an excellent opportunity as CEE students have received this award the last two years. For more information on student qualifications and application requirements, please visit the [Bill Craig Scholarship website](#). The due date for scholarship applications is 4:00 PM Friday, February 15.

**List of Scholarships and Research Experience for Undergraduates**
The ASCE Student Chapter has created a [list of scholarships](#) available for Civil/Environmental disciplines. Many of the scholarships have been awarded to students in the department over the last few years. In addition, the chapter has also created a list of national and international [Research Experience for Undergraduates (REU) programs](#) available for Summer 2013. Many of these scholarships and REU’s have application due dates in either February or March. If interested, don’t wait; apply today!

**Re-inventing the Nation’s Urban Water Infrastructure Research Programs**
The Engineering Research Center for Reinventing the Nation’s Urban Water Infrastructure (ReNUWIt) has several openings for paid undergraduate research positions for Summer 2013 through its REU Program. ReNUWIt’s four partner schools are Stanford, Berkeley, Colorado School of Mines, and New Mexico State University. The research positions last for 9 weeks and are for sophomore – seniors graduating no earlier than December, 2013. For more information, please visit the [ReNUWIt Website](#). The application deadline is February 15, 2013.

**North-Central Section of the Institute of Transportation Engineers Scholarships**
The North-Central Section of the Institute of Transportation Engineers (NCITE) is offering four scholarships for students actively interested in the transportation industry. Applications and scholarship information can be found on the [NCITE Website](#). The application due date is March 15th.

**Internships**

**Game, Fish & Parks Designer/Draftsman Position**
The GFP is looking for a summer intern who will assist the survey, design, and plan preparation for general park construction and basic road projects in parks throughout the state. Intern must be actively pursuing a degree in landscape architecture/design, engineering or construction management. Knowledge of, or experience in engineering or construction management is desirable. Intern must display self-motivation, the ability to conduct activities with limited supervision and the ability to work well with people. The minimum salary is $9.45/hr.
Applicant must be a full-time student at a college or university. Preference will be given to those with junior standing or above by the end of the Spring 2013 semester. Preference will be given to South Dakota residents and students of South Dakota institutions. To apply go to: [http://bhr.sd.gov/workforus/intern/default.aspx](http://bhr.sd.gov/workforus/intern/default.aspx). For more information, please contact Al Nedved at the South Dakota Division of Parks and Recreation (Al.Nedved@state.sd.us).

**Undergraduate Internship in Seoul, South Korea**

*Lotte Engineering & Construction*, which is based in Seoul South Korea, is looking to hire 1-2 summer interns. The pay would be $1,000/month. Students would need to pay for travel to and from South Korea ($1,600 - $2,000) and room and board. If interested, please contact Dr. Bang, who is currently working with this firm on a dust control research project.