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Contact Us

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Calendar

MAR 18-22 – **Finals Week**

MAR 27, Wed – All Owen Hall restrooms closed for replacing back flows for the building supply water.

MAR 30, Sat - [Chintimini Kennel Club AKC Dog Show](#). This family-friendly event showcases over 150 breeds of dogs in various events. Mixed breeds also participate in obedience and rally. Linn County Fair and Expo Center, Albany (*free*).

In the News

OSU AGC Student Chapter Officers planned and executed two, 90 minute hands-on workshops for 30 5th and 6th grade T.A.G. students, as a part of [OSU Winter Wonderings](#) on March 2.

Seminars

APR 2, Tues - **Structures** Faculty Candidate Presentation, 11am, 311 Kearney Library. [Abstract here](#). All are invited to attend.

APR 2, Tues – “Geosynthetic Reinforced Soil Structures for Transportation in Japan: Recent Developments, Earthquakes, Floods and Restoration,” presented by Prof. Fumio Tatsuoka (Tokyo University of Science). 312 Kearney Hall, 4pm.

APR 8, Mon - **Structures** Faculty Candidate Presentation, 11am, 311 Kearney Library. All are invited to attend.

APR 11, Thurs - **Structures** Faculty Candidate Presentation, 11am, 311 Kearney Library. [Abstract here](#). All are invited to attend.

Opportunities

APR 5, Fri – **National Instruments LabVIEW Campus Tour**, located between Milam and Gilkey Hall. See demonstrations of the latest technologies for students, educators and researchers. Stop by the bus from 9 am–3 pm to network with LabVIEW experts and get some free stuff.

2013 ASCE Pacific NW Student Conference - April 25–27. This year in addition to Technical Paper, Steel Bridge, and Concrete Canoe Competitions, the planning committee is putting together competitions on;

1. Geotechnical Engineering,
2. Transportation
3. Environmental Engineering, and
4. Engineering Knowledge.

[See link here with complete competition descriptions](#). If you are interested in

participating in, register in Cindy's office. It is going to be first come first served bases. In addition to signing in for the competition, you are required to sign the *Acknowledgement of Risk and Waiver of Liability* form, read and agree with the *Attendee Behavior Agreement* AND you are expected to attend the Student-Professional Roundtable discussion and the Banquet. Contact [Kristina Milaj](#) if you have questions. Let's all do our best to make our university and ourselves proud in each competition! You'll get a cool-looking, long sleeved t-shirt, free meals and a chance to have a fun time competing against students from across the Pacific Northwest.

MESA Day is a celebration of students' innovation, hard work, and interest in science, technology, engineering, and math. MESA Day provides a fun and exciting opportunity for over 250 diverse 6th-12th grade students to design and build projects, compete against their peers, and learn by doing. [Register here to volunteer](#) on Friday, May 10, 2013 at Portland State University.

Student Groups

APR 2, Tues - Contractor's Night **mandatory** meeting for all students attending, 4:30pm, 112 Kearney. See Lauren Farnen in Kearney 101F if you will be unable to attend this meeting...one alternative date will be set. Contractor's Night is on Friday, April 12. Student sign-up sheet is available in 101 Kearney.

Jobs

[Assistant Construction Engineer Intern](#) – West Coast Contractors. We are offering \$11-15 per hour DOE, plus subsistence/travel pay when on site at a project location. We request that any interested applicants please send me their resume at this email address. We would like to try to start interviewing applicants next week if we get enough interest.

Keri Wisely, HR/Payroll Specialist
West Coast Contractors, Inc.
541-267-7689 // Direct: 541-767-0095
hradmin@westcoastcontractors.com

[Student Laborers](#) - Polk County Public Works. We will hire several students from this recruitment. If one or two of those hires were to be engineering students, it would fit in well with some of our planned work. Application deadline is April 1, 2013.

Field Engineer - Kerr Contractors, an Oregon heavy civil contractor has a current opening for a fulltime Field Engineer. Candidates must have, as a minimum, a B.S. in Construction Engineering Management. Kerr Contractors works throughout the Pacific Northwest on heavy civil construction including grading, paving and underground utilities. Job duties for this position include project estimating, job cost analysis, scheduling and project administration. Candidates will work directly with project managers, estimators, field personnel and subcontractors. Activities will include quantity surveys, job cost tracking and change order requests, scheduling and project documentation. KCI is looking for aggressive and self-motivated individuals who come aboard to contribute and make a difference. To schedule an interview for Wednesday, April 16th, bring your resume to Kearney 101F.

Summer Internships - Kerr Contractors, Inc. (KCI), works in the Portland metro area and throughout Oregon on heavy civil construction including grading, paving and underground utilities. Job duties will be assigned depending upon experience to provide the individual the greatest exposure to a variety of construction methods, practices and technology. KCI is looking for aggressive and self-motivated individuals who come aboard to contribute and make a difference. Equal opportunity employer. To schedule an interview for Wednesday, April 16th, bring your resume to Kearney 101F.

Apollo Mechanical is interested in hiring for a PE type position(s). We are interested in hiring from the recent graduates graduating Winter Term 2013 or sooner. We will most likely have an additional round at the end of Spring Term as well. Forward resume and cover letter stating why you are a good fit for a mechanical contractor, to Daniel Webster by EOD March 29, 2013 (***date extended***). Qualified applicants will need to be willing to relocate to the greater Portland area and/or be willing to commute if relocation is undesirable.

Summer interns - for a 220 single family home and seven (20-plex) 4 story condos that are currently under construction, next to Nike in Beaverton.

Josh Komp, jkomp@corniceconstruction.net
Cornice Construction, LLC
9020 SW Washington Sq Dr #505
Portland, OR 97223

Structures Candidate 1

APR 2, Tues – **“Hybrid Sliding-Rocking Post-Tensioned Segmental Bridges In Seismic Regions,”** presented by Petros Sideris, Ph.D., Post-Doctoral Research Fellow, University at Buffalo, The State University of New York

Abstract: In this presentation, the concept of hybrid sliding-rocking (HSR) post-tensioned segmental members for seismic applications in the framework of accelerated bridge construction is discussed. Fundamental components of the HSR members are the HSR segmental joints coupled with internal unbonded post-tensioning (PT). The HSR joints can potentially exhibit sliding and/or rocking to mitigate the applied seismic loading. The joint response is further controlled by the geometry of the PT system, which can follow linear or nonlinear layouts along the member length. Two distinct types of HSR members are investigated; those with slip-dominant joints and linear PT geometry, intended for bridge substructures, and those with rocking-dominant joints and nonlinear PT geometry, intended for bridge superstructures. The seismic performance of the proposed HSR system is evaluated through a two-stage experimental study conducted at the Structural Engineering and Earthquake Simulation Laboratory (SEESL) at the University at Buffalo. In the first stage, shake table testing on a large-scale (1:2.39) HSR bridge specimen was conducted, while the second stage included quasi-static cyclic testing of the specimen’s substructure.

Numerical predictions for the dynamic and quasi-static response of the bridge specimen are provided by models generated with the ABAQUS general-purpose finite element software and the SAP2000 structural analysis program. These predictions are compared with the experimental data. Other studies associated with this research endeavor will be briefly outlined, including investigations of the performance of the flexibility-based beam-column element formulation in the presence of softening/deteriorating section constitutive response, the response of strand-anchor systems, and the frictional properties at the HSR joint interface.

Structures Candidate 3

APR 11, Thurs – **“Strut-and-Tie Modeling and Experimental Testing of Reinforced Concrete Inverted-T Beams,”** presented by Nancy Larson, Ph.D. Candidate, The University of Texas at Austin

Abstract: Several recently constructed inverted-T bridge bent caps have developed significant diagonal shear cracking. The resulting safety and serviceability concerns prompted an investigation into the design and behavior of such structures. Contrary to rectangular deep beams, inverted-T beams are loaded on a ledge at the bottom, or tension chord, of the beam. This loading induces a tension field into the web and the resulting complex strain distribution renders sectional design provisions inadequate. The current design methodology did not capture all critical elements of the structural behavior so an improved design procedure was recommended.

The applicability of strut-and-tie modeling, developed for rectangular deep beams and simpler, two-dimensional design, was evaluated. An extensive experimental study was conducted in which thirty three large-scale reinforced concrete inverted-T specimens were tested and the effects of the following variables were investigated: ledge geometry, quantity of web reinforcement, number of point loads, member depth, and shear span-to-depth ratio. It was concluded that strut-and-tie modeling offers a simple and accurate design method for the more complex strain distributions in these beams and was recommended for use in inverted-T beam design along with existing serviceability requirements for deep beams. The final step will be code implementation to aid future designers.

Winter Wonderings

OSU AGC Student Chapter Officers planned and executed two, 90 minute hands-on workshops for 30 5th and 6th grade T.A.G. students, as a part of OSU Winter Wonderings on March 2. The officers assisted the students in the construction of a tower using principles of structural design and stages of planning to include, scope, schedule, materials & cost. The students had a fulfilling educational experience that was very fun for all involved!



Go Beavs!

Forward newsletter submissions to nancy.brickman@oregonstate.edu by **Friday** each week. Prior newsletters archived at <http://cce.oregonstate.edu/node/223>