

PURDUE UNIVERSITY EERI STUDENT CHAPTER

Annual Report

2013 – 2014

Chapter Leadership

Faculty Advisor

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Student Leadership

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I. EERI NATIONAL CONFERENCE

In July of 2014, William Luper will be attending the 10th National Conference on Earthquake Engineering in Anchorage, Alaska. His travel expenses will be partially reimbursed by EERI through a travel fellowship. William will speak with the leadership from other chapters to learn how Purdue EERI can better engage students and the community.

II. MEETINGS AND SEMINARS

1. Meetings

a. Fall Semester 2013 Callout and Elections **29-Aug-2014**

During this meeting, officers were elected for the upcoming academic year. The meeting also served as a callout to explain to potential members the various benefits associated with EERI membership.

b. Executive Meeting **7-Feb-2014**

At this meeting, the following topics were discussed:

i. Outreach

The executive board discussed the local highschool outreach program, which is a miniature lecture series on earthquake engineering followed by a shake table competition.

ii. Seminar Speakers

The structural engineering program sponsors weekly seminars for enrichment of graduate and undergraduate students. Speakers are brought in from industry as well as academia to discuss topics of interest in structural engineering, such as interesting projects or current research areas. As part of EERI's involvement at Purdue, the chapter co-sponsors some of these events. The executive board discussed which companies to contact about providing speakers.

iii. Fundraising

The executive board discussed the possibility of hosting a regional ATC Post-Disaster Safety Assessment training seminar series.

2. Seminars

a. Structural Challenges of the VietinBank Business Centre **8-April-2014**

Speaker: James Swanson; Halvorson and Partners

Swanson detailed the development of the VietinBank Business Centre in Hanoi, Vietnam. The structure comprises a 365m tall office tower and a 240m tall hotel tower connected at their bases by a podium. When complete, it will be the largest tower in Vietnam. Swanson's presentation included discussion of the lateral load resisting system and special considerations for constructing in a flood plain. He also discussed cultural challenges faced in undertaking a project in a foreign country.

In addition to the presentation, EERI members provided Swanson a tour of Bowen Laboratory for Large-Scale Civil Engineering Research.

b. Retrofit of California Memorial Stadium

15-April-2014

Speaker: David A. Friedman; Forell/Elsesser Engineers, Inc.

Friedman spoke about the engineering challenges faced in the retrofit of California Memorial Stadium. He was also given a tour of Bowen Laboratory and met with Purdue EERI student members afterwards. The group discussed how best to maintain active membership from student members as they transition into becoming young professionals.

c. The Cayan Tower & Structural Engineering Computer Technology

22-April-2014

Speaker: Christopher Brown; Skidmore, Owings & Merrill

Brown spoke about his experience with bridging the gap between various software packages employed in the consulting industry. He discussed difficulties that frequently arise when interacting with clients. He then detailed the development of Cayan Tower, a skyscraper renowned for its rotating floor plan.

Brown also was given a tour of Bowen Laboratory by EERI student members.

III. OUTREACH

1. Miniature Earthquake Engineering Lecture/Competition at Local High School

This event has not yet been held, but details were discussed on how to coordinate it in the fall semester of 2014. The event consists of two visits to a local high school in West Lafayette, IN. During the first visit, a lecture will be given to introduce students to the fundamentals of structural dynamics and earthquake engineering. At the second, students will use their knowledge to construct small structures to resist lateral loads. These structures will then be shaken using the EERI chapter's miniature shake table.

The materials (marshmallows, spaghetti, gumdrops) are to be distributed to the students using a budget system. In this system, students will be assigned a finite amount of fake currency with which to purchase materials. Materials will be assigned different costs. The objective of the students is to build the tallest tower which will withstand a strong ground motion. By using a budget system, students are given a perspective on how engineering in the real-world works: with limited budgets, limited resources, and limited time. The system also encourages a wider variety in structures, as students can choose which materials to use.

2. ATC Post-Disaster Assessment Training

This event has not yet been held, but details were discussed on how to make it a feasible fundraiser for the chapter in the upcoming academic year. The cost of a speaker can be as high as \$900, while the cost of books is approximately \$90. To offset these costs, some items discussed were: (1) having the books donated or having them sold to the chapter at a reduced cost, (2) co-sponsoring the event with a nearby university with a student EERI chapter, and (3) variable pricing for professionals and students (i.e. charging firms a higher cost). Advertisements for the event will be distributed to professional engineering organizations and firms for the states of Illinois and Indiana.

IV. PHOTOGRAPHS



Figure 1. James Swanson attends dinner with EERI Chapter members and Purdue Faculty. [left-to-right: Quang Nguyen, Roland Hill, William Lupher, Ghadir Haikal (Assistant Professor), James Swanson.]



Figure 2. David Friedman gives a seminar to graduate structural engineering students at Purdue University.

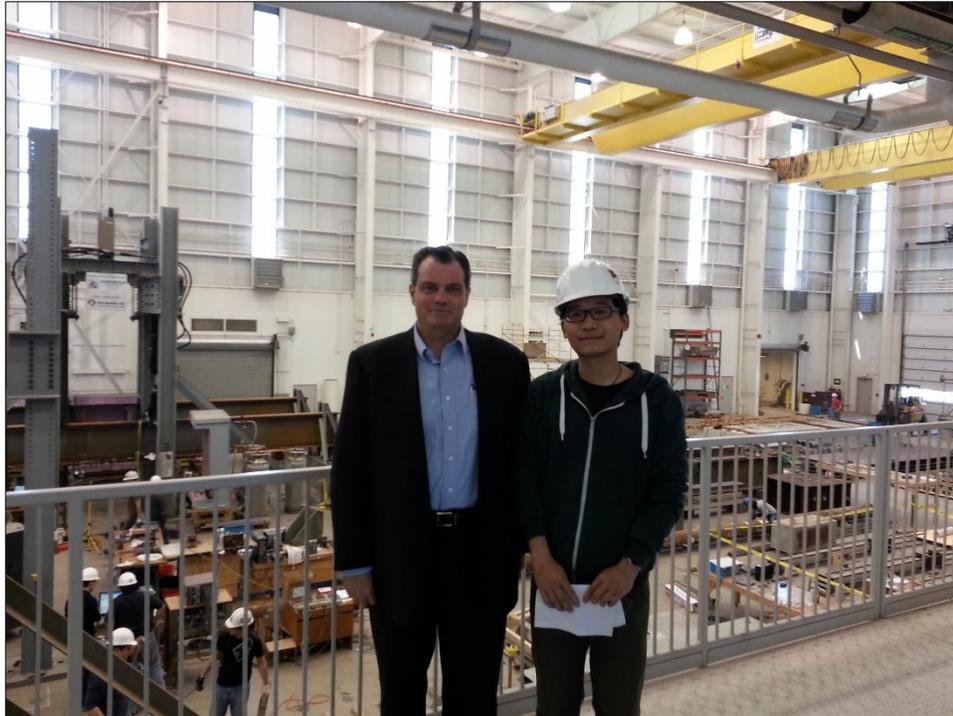


Figure 3. Christopher Brown is given a tour of Bowen Laboratory for Large-Scale Civil Engineering Research by Qiaqia Zhu, EERI Outreach Committee Chair.



Figure 4. Christopher Brown attends dinner with EERI Chapter members.
[left-to-right: Quang Nguyen, Scott Wonderly, Christopher Brown, Yunlan Zhang, Lucas Laughery, William Luper.]