

2015-2016 ANNUAL REPORT

Purdue University Student Chapter of the Earthquake Engineering Research Institute



Report Date: May 10th, 2016

This report summarizes the membership and activities conducted by the Purdue University Student Chapter of the Earthquake Engineering Research Institute during the 2015-2016 academic year.

MISSION & GOALS

The purpose of the EERI Purdue Student Chapter shall be the dissemination of knowledge of the theory and practice of all phases of earthquake engineering. Furthermore, this chapter will promote the professional development of the students involved.

MEMBERSHIP

The Purdue University Student Chapter had a total of 19 members in 2015-2016.

OFFICERS

The Board consisted of the following members:

Role	Name	EERI Member Number	Email	Student Status
President	Yunlan Zhang	17077	zhan1337@purdue.edu	Graduate student
Vice President	Aishwarya Puranam	17436	apuranam@purdue.edu	Graduate student
Secretary	Ryan Welchel	18197	rwhelch@purdue.edu	Graduate student
Treasurer	Aman Anand		anand17@purdue.edu	Undergraduate student

FACULTY & INDUSTRY ADVISORS

Chapter Advisor: Dr. Santiago Pujol

MEMBERS

A complete list of members is shown below.

Name	Email	Member #	Undergrad/Grad
A. Ceren Satioglu	asatiogl@purdue.edu	18222	Grad
Aishwarya Puranam	apuranam@purdue.edu	17436	Grad
Aman Anand	anand17@purdue.edu		Undergrad
Daniel Rawson	rawsond@purdue.edu	17910	Undergrad
David Leechuy	dleechuy@purdue.edu	18202	Grad

Ge (Gaby) Ou	gou@purdue.edu	18304	Grad
Ghazi Binarandi	ghazi@purdue.edu	17418	Grad
Heather Todak	htodak@purdue.edu	18233	Grad
Laura Nettesheim	lnettesh@purdue.edu	18196	Grad
Li-Hui Cheng	cheng231@purdue.edu	17403	Grad
Lucas Laughery	llaugher@purdue.edu	16595	Grad
Marvin Ko	ko48@purdue.edu	18296	Grad
Prateek Shah	shah151@purdue.edu	18238	Undergrad
Quang Nguyen	nguyenq@purdue.edu	14153	Grad
Rachel Chicchi	rchicchi@purdue.edu	17186	Grad
Ryan Whelchel	rwhelch@purdue.edu	18197	Grad
WeiPhang Gan	ganw@purdue.edu	17421	Grad
William Pollalis	wpollali@purdue.edu	18265	Undergrad
Yunlan Zhang	yunlan.zhang.1@purdue.edu	17077	Grad

CHAPTER ACTIVITIES

REGULAR CHAPTER MEETINGS

Member Meetings

September 16, 2015 – Officer Elections, 15 members in attendance

October 28, 2015 – Mickey Mouse Project, 9 members in attendance

January 26, 2016 – 1998 Taiwan Earthquake Documentary, 6 members in attendance

February 10, 2016 – Membership Callout, 8 members (3 new!) in attendance

March 2, 2015 – Seismic Design Competition Help, 8 members in attendance

April 1, 2015 – Seismic Design Competition Critique, 8 members in attendance

Fall Semester Summary

At the beginning of the semester officers were elected and committee members were selected. Immediately, planning and preparation for the October SAP 2000 workshop was underway. Throughout the semester the chapter worked on a project named "Mickey Mouse". The project asked the question: does base shear strength effect period? The project was planned through a few stages from initial ideas to specimen design and was handed off to a class project for further development at the beginning of the spring semester.

Spring Semester Summary

The seismic design competition is held every spring and the graduate student members spent time helping the undergraduate design team problem solve aspects of the team's design solution. Criticisms were also provided on the presentation and poster design for the competition. Also during the semester, a seminar by Richard Eisner was hosted by the chapter.

FRIEDMAN FAMILY VISITING PROFESSIONAL or DISTINGUISHED LECTURE VISIT

Mr. Eisner gave Purdue students a seminar on March 1st 2016. Mr. Eisner emphasized the importance of planning and preparing for the worst case scenario. He used examples from Japan's response to recent events to highlight ways in which cities and regions can prepare for disasters that can disrupt infrastructure.

After the seminar, Mr. Eisner met with Chapter leadership and officers. Student members and Mr. Eisner discussed the chapter activities, challenges, and future plan of the chapter.



Figure 1. Mr. Eisner discussed a question with Prof. Sozen after the seminar.

{Purdue Civil Engineering Open House}

The EERI student chapter helped host Purdue Civil Engineering Open House on September 18th 2015. Student members showed first year engineering students about earthquake engineering. Chapter members taught those young students basic knowledge and strategies to build their own structures to resist earthquakes. Those structures were evaluated on a mini shake table under scaled ground motions.



Figure 2. Chapter members giving interactive demonstrations using a mini shake table.

{SAP 2000 Workshop}

On October 17th, 2015, the Chapter hosted a day long SAP 2000 training workshop at Neil Armstrong Hall of Engineering on Purdue University's West Lafayette campus. Rob Tovani from Computers & Structure, Inc. came from CSI headquarters to instruct participants in the use of SAP 2000 structural analysis software. The workshop was broken into two parts. During the morning session, Rob taught participants about general modeling features of SAP2000, including defining materials, sections, geometry, and loading. During the afternoon session, he covered seismic analysis using SAP2000. He made use of interactive examples to give the participants experience with the software. The workshop was attended by 47 undergraduates and graduate students.



Figure 3. Rob Tovani instructing participants.



Figure 4. Rob Tovani helping participants with one of the demonstrations.

{ATC South Napa Webinar Viewing }

On September 2nd, 2015 the Chapter reserved a room for members to watch the ATC webinar about the 2015 South Napa earthquake.

{1999 ChiChi Earthquake Debriefing Viewing}

On January 26th, 2016 the Chapter watched the EERI debriefing video from the 1999 ChiChi earthquake. Afterwards, they discussed what they learned from the video.

SEISMIC DESIGN COMPETITION TEAM

The team at Purdue consists of about 10 members, of which 4 are official EERI members. The team forms in the fall semester and begins considering Seismic Engineering and learning about the general rules of the competition. Once the rules are released, a preliminary design is formed and the proposal is written. The spring semester consists of modifying the preliminary design into a final design and construction is started. This year's team was composed of mostly female underclassmen, with a few veteran members.

SDC Team Members

Name	EERI Member Number	Email	Role
Danny Rawson	17910	rawsond@purdue.edu	Captain
Valerie Niemiec	18666	vniemiec@purdue.edu	Team member
Rachel Stewart	18643	stewa121@purdue.edu	Team member
Loshini Vickneshwaran	18645	lvicknes@purdue.edu	Team member
Annie Gassner	N/A	agassner@purdue.edu	Team member
Amber Reiff	N/A	reiffa@purdue.edu	Team member

Alexandra Natoli	N/A	natoli@purdue.edu	Team member
Kevin Jackowski	N/A	kjackows@purdue.edu	Co-captain
Madi Scheessele	N/A	mscheess@purdue.edu	Team member
Shannon Gunn	N/A	gunn3@purdue.edu	Team member

SDC Team Financial Sponsors

Purdue ASCE	pu-asce@lists.purdue.edu	Full Sponsorship	The team was entirely supported by the Purdue chapter of ASCE.
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Team results and lessons learned

The Team placed 8th overall this year, and the tower withstood all three ground motions. We learned from other teams the importance of consistent pieces, which can be implemented using laser cutters. The team also learned a fair amount about the concept of having load paths to deliver lateral loads to the base of the tower.

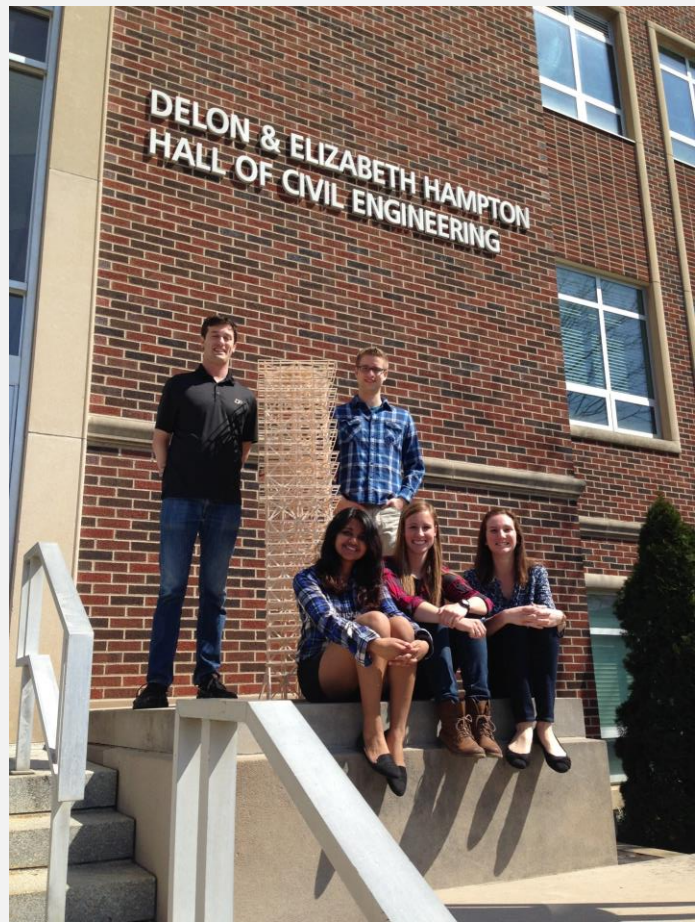


Figure 5. Purdue seismic design team 2016

ELECTION & ELECTION RESULTS

An election for officers for the 2015-2016 academic year was held on September 2015. The table below shows the new officers appointed to the Chapter board who will take office on September 2015.

Role	Name	EERI Member Number	Email	Student Status
President	Yunlan Zhang	17077	zhan1337@purdue.edu	Graduate student
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Secretary	Ryan Whelchel	18197	rwhelch@purdue.edu	Graduate student
Treasurer	Aman Anand		anand17@purdue.edu	Undergraduate student

LIST OF ATTACHMENTS