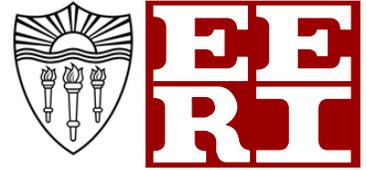


# 2015-2016 ANNUAL REPORT

## University of Southern California Student Chapter of the Earthquake Engineering Research Institute



Report Date: May 17, 2016

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

### MISSION & GOALS

EERI-USC was founded in 2009 to help foster and encourage collaboration among students with varying levels of education and experience. Graduate students mentor undergraduate students by passing on their technical knowledge and offering career advice, to better prepare them for their professional endeavors. We also organize company visits and professional talks, through which students engage in technical dialogue and get a glimpse into their future as a structural engineer. Lastly, we participate in EERI's annual international undergraduate Seismic Design Competition (SDC), in which our undergraduate students showcase their design abilities. Our aim is to encourage members to further develop their leadership and collaborative skills, as well as expand their practical knowledge.

### MEMBERSHIP

The University of USC Student Chapter had a total of 13 members in 2015-2016.

### OFFICERS

The Board consisted of the following members:

Role	Name	EERI	Email	Student Status
President	Cindy Wei	ID# 17856	cindywei@usc.edu	Undergraduate
Vice President	Natasha Nazarian	ID# 17906	nrnazari@usc.edu	Undergraduate
Secretary	Piyounik	ID# 17909	phakopia@usc.edu	Undergraduate
Treasurer	Taniket Sawant		tanikets@usc.edu	Graduate
Archives Chair	Swarna Karuppiah		karuppia@usc.edu	Graduate
SDC Co-Captain	Ryan Meier	ID# 17924	rmeier@usc.edu	Undergraduate
SDC Co-Captain	Rana Kashani	ID# 18689	sadatkas@usc.edu	Undergraduate

Board meetings were held every Thursday at 6pm.

## ADVISORS

List advisors with contact information and affiliation.

Name	Position	Email
Navid Nastar	Faculty/Industry Advisor	nastar@usc.edu
Gregg Everett Brandow	Faculty/Industry Advisor	brandow@usc.edu

## MEMBERS

A complete list of members is shown below.

Name	EERI Member	Email	Student Status
Stephanie Istillarte	ID# 18697	istillar@usc.edu	Undergraduate
Felipe Hernandez	ID# 18534	fdhernan@usc.edu	Undergraduate
Sam Kinsey	ID# 18532	skinsey@usc.edu	Undergraduate
Alex Weisfeld	ID# 18535	Weisfeld@usc.edu	Undergraduate
Victoria Cuenca	ID# 18679	cuencaar@usc.edu	Undergraduate
Evan Cochran	ID# 16871	tecochra@usc.edu	Undergraduate
Rodion Malyshev	ID# 18533	rmalyshe@usc.edu	Undergraduate
Ankit Chaudhari	ID# 18698	ankitc@usc.edu	Undergraduate
Natasha Nazarian	ID# 17906	nrnazari@usc.edu	Undergraduate
Cindy Wei	ID# 17856	cindywei@usc.edu	Undergraduate
Piyounik Hakopian	ID# 17909	phakopia@usc.edu	Undergraduate
Ryan Meier	ID# 17924	rmeier@usc.edu	Undergraduate
Rana Kashani	ID# 18689	sadatkas@usc.edu	Undergraduate

## BUDGET & FINANCIALS

Sponsors:

Sponsor Name/Organization	Contact Person	Amount
DCI Engineers	Mark Aden	\$500
Los Angeles Tall Building Structural Design	Gregg Brandow	\$1000
John A. Martins & Associates	Shane Fitzgerald	\$500
Charles Devore	Charles Devore	\$200
David Wilson Fund	Gregg Brandow	\$2648.09
Total		\$4848.09

## CHAPTER ACTIVITIES

### PROFESSIONAL EVENTS

#### 1.1. Structural Talk with Rafi Halajian

Monday, October 5, 2015

Total Attendance: 11

Rafi Halajian, a USC alumnus and a previous SDC captain for the 2012 EERI-USC SDC team came to give a structural talk to our SDC team. The lecture took place in the KAP Basement. He discussed his own experience as captain of the SDC team of 2012 and provided valuable insight about what to watch out for and what to incorporate in our design.

#### 1.2. Structural Talk with Professor Brandow

Friday, November 6, 2015

Total Attendance: 15

A civil engineering design professor, Gregg. E. Brandow, gave a structural talk in KAP 209. He discussed the many factors involved in the design of a building and gave a crash course in structural systems. Dr. Brandow also discussed the structural systems in downtown and how we can incorporate those systems in our design.

#### 1.3. Friedman Family Visiting Professionals Guest Lecture with David Cocke

Wednesday, February 24, 2016

Total Attendance: 12

As part of EERI's Friedman Family Visiting Professionals Program, the president of Structural Focus, David Cocke, visited the USC chapter of EERI. He gave a presentation in KAP 209 where he talked about EERI, the evolution of structural engineering and how it will change in the future, five projects he worked on at Structural Focus, and how structural engineers can better our future. He also talked about how he became the founder and president of Structural Focus. Cookies were provided by EERI-USC. After the lecture, the executive board treated Mr. Cocke to dinner at Bacaro LA.

### OUTREACH/RECRUITING EVENTS

#### 2.1. Viterbi New Student Welcome Luau

August 20, 2015

Total Attendance: Over 100

The Viterbi School of Engineering hosted the Viterbi New Student Welcome Luau in which students got to play fun games, enjoy island-style food, and get to know the students, faculty, and staff. After playing fun games and winning cool prizes, the students then attended the Viterbi student organization fair where they got to meet representatives from different Viterbi

organizations and learn what they do. EERI-USC had a booth where we presented the events we host and how to get involved.

## 2.2 New CEE Undergraduate Student Orientation

August 29, 2015

Total Attendance: 25

An orientation was organized jointly by CEE organizations for incoming freshmen and transfers students in the CEE department. This orientation took place in a classroom on the second floor of GFS. First, the CEE department chair, Lucio Soibelman, gave an introduction of the department and the CEE department advisor, Geraldine Lorenzo, broke down the different paths students can take within the CEE department. Then a panel of civil engineering professionals from different industries was asked questions about their work. After this, students were given a lunch break in the E-Quad where they enjoyed Korean Barbeque cooked by a CEE professor, Hung Leung Wong. After lunch, students returned to GFS and three upperclassmen civil engineering students with different emphases talked about their experience at USC. Finally, civil engineering organizations—ASCE, Chi Epsilon, ITE, CMAA, and EERI—gave information about their organizations and how to join.

## 2.3. Title: 1st General Meeting

Thursday, September 3, 2015

Total Attendance: 30

The executive board gave a presentation in the KAP Basement. First, the newly elected officers introduced themselves. Then president and vice president gave an overview of our organization goals and the events we host throughout the year. Following them, the SDC Team co-captains then introduced the annual Seismic Design Competition we participate in every year and how to get involved. Attendees enjoyed Chipotle and after the presentation, they got to meet the executive board.

## JOB SEARCH ACTIVITIES

### 3.1. Walter P. Moore Company Visit

Friday, November 6, 2015

Total Attendance: 30

Students got to visit Walter P. Moore's newly opened Los Angeles office on the 21st floor of the downtown AON building on Wilshire Blvd. Walter P. Moore provided refreshments. Two engineers gave a fascinating presentation on the projects they work on and an intern talked about her experience at Walter P. Moore. Then half the students were given a tour of the office and got to meet the principal, while the other half stayed with the two engineers and ask them questions. Then the grouped switched. At the end, Walter P. Moore employees handed out "WPM swag bags" with ear buds, pens, and other cool things.

### **3.2. ARUP Company Visit**

Friday, February 5, 2016

Total Attendance: 20

Students got to visit ARUP's Los Angeles office. Three engineers gave a presentation on the projects they worked on and the different design challenges they had to address in their projects. Then the students were given a tour of the office. After the tour, ARUP provided lunch and students got to mingle with the engineers that presented earlier. After lunch, the hiring manager went over the application process and what to expect as an intern or a new hire.

### **3.3. John A. Martin & Associates, Inc. Company Visit**

February 12, 2016

Total Attendance: 12

Students got to visit JAMA's Los Angeles office in the middle of downtown. Two engineers and one newly-hired intern from USC gave a presentation about the fundamentals of structural design including the codes, ethics, and design methods. Then the students were given a tour of the office and got to speak to two employees—one drafter and one structural engineer. The drafter showed the projects he was working on and the challenges involved in drafting. The structural engineer talked about one of his previous projects and the structural design features incorporated.

## **SOCIAL EVENTS**

### **4.1. Seismic Design Team Social**

Thursday, September 17, 2015

Total Attendance: 15

The SDC co-captains gave a presentation on the process of the design, modeling, analysis, and construction of the SDC structure as well as the rules involved. Students were broken up into teams to brainstorm ideas for the design, then each team pitched their ideas. Sandwiches from TOGO's were provided.

## **SDC ACTIVITIES**

### **5.1. Bi-Weekly Seismic Design Team Meetings**

Every Tuesday and Friday

Total Attendance: 5-10

The SDC captains hold bi-weekly meetings all throughout the year on Tuesdays and Fridays. During the fall semester, these meetings involve the design process of the structure where the structural system is modeled and analyzed. During the spring semester, the meetings evolve into

the construction phase where we start building the prototype as well as organizing transportation and hotel accommodations for the competition.

**5.2.** Date: Monday, April 4 to Friday, April 8, 2016

Title: Seismic Design Competition (SDC)

Total Attendance: 12 (USC students)

Undergraduate students must design and construct a 5' building prototype out of balsa wood and glue that is resistant to seismic activity and take it to the competition location. The Undergraduate Seismic Design Competition will take place in San Francisco with 30 schools participating internationally. On Monday, teams must check in their structure and set up their model display. On Tuesday is the preliminary judging. Then Wednesday is the team presentation, as well as a silent auction. Thursday is the Model-Shaking day where the building models are tested on a shake table with three excitations. Finally, Friday will be the SDC Awards Ceremony where the results are announced.

#### SEISMIC DESIGN COMPETITION TEAM

Our undergraduate team met up twice a week, with each meeting headed by one of the two co-captains. In the Fall 2015 semester, we focused mainly on the design aspects of our structure. Our team received advice from graduate students as well as our advisors as we developed our design. During the Spring 2016 semester, we began and completed construction.

#### SDC Team Members

Same as Members list under Membership.

#### SDC Team Financial Sponsors

Same as Sponsors list under Budget and Financials.

#### Team results and lessons learned

Unfortunately, our structure failed on the last shake at this year's SDC 2016 competition. This was mainly because we didn't give ourselves enough time to construct our structure properly, and we came across a few mistakes during construction that set us back. One mistake was that the holes in our core wall were misaligned. Since we didn't have enough time to start over, we cut the core from the second floor, which created a weak point in our structure and ended up being the location where our structure failed. Areas where we could improve are in time management, organization, and communication. This year we hope to start construction sooner, and make sure our meetings are more organized so that all team members are on the same page.

## ELECTION & ELECTION RESULTS

An election for officers for the 2016-2017 academic year was held in May 2016. The table below shows the new officers appointed to the Chapter board who will take office in May 2016.

<b>Role</b>	<b>Name</b>	<b>EERI</b>	<b>Email</b>	<b>Student Status</b>
President	Felipe	ID# 18534	cindywei@usc.edu	Undergraduate
Vice President	Stephanie	ID# 18697	nrnazari@usc.edu	Undergraduate
Secretary	Enrico		phakopia@usc.edu	Undergraduate
Treasurer	Bellikoth Vikas		tanikets@usc.edu	Graduate
Archives Co-Chair	Taniket Sawant		karuppia@usc.edu	Graduate
Archives Co-Chair	Jenny Chen		rmeier@usc.edu	Undergraduate
SDC Chair	Jennifer Villacis		sadatkas@usc.edu	Undergraduate
SDC Co-Captains	Paloma Grant		palomagr@usc.edu	Undergraduate
SDC Co-Captains	Hugo Lepe		hlepe@usc.edu	Undergraduate

## FEEDBACK FOR EERI

We sincerely appreciate all the work EERI's SLC has put into organizing the Seismic Design Competition as it has proven time and again to be a memorable and valuable learning experience.