

# 2018-2019 ANNUAL REPORT

## Cal Poly SLO Student Chapter of the Earthquake Engineering Research Institute

Report Date: June 11<sup>th</sup>, 2019



This report summarizes the membership and activities of the California Polytechnic State University, San Luis Obispo Student Chapter of the Earthquake Engineering Research Institute during the 2018-19 academic year.

### MISSION & GOALS

The Cal Poly SLO EERI Student Chapter:

- Serves and competes in the EERI Undergraduate Seismic Design Competition. Most of the student chapter's efforts are focused on performing well at the competition and educating the undergraduate team on earthquake engineering.
- Plans and executes educational outreach events, particularly hands-on activities to engage K12 students from underrepresented groups.
- Arranges a visit from at least one external speaker annually that focuses on earthquake engineering to complement the existing SEAOC student chapter speaker roster.

### MEMBERSHIP

The California Polytechnic State University, San Luis Obispo Student Chapter had 16 members in 2018-19.

### OFFICERS

The Board consisted of the following members:

Role	Name	EERI #	Email	Student Status
President / Team Captain	Jenna Williams	19349	jwill107@calpoly.edu	Undergraduate
VP / Construction Captain	Ryan Millward	30197	rmillwar@calpoly.edu	Undergraduate
Analysis Co-Captain	Julia De Hart	20378	jrdehart@calpoly.edu	Undergraduate
Analysis Co-Captain	Nick Coburn	20379	ncoburn@calpoly.edu	Undergraduate
Design Co-Captain	Michael Goldenberg	20380	mngolden@calpoly.edu	Undergraduate
Design Co-Captain	Maja Sagaser	20384	msagaser@calpoly.edu	Undergraduate
Materials Captain	Ryan Thornton	30168	rdthornt@calpoly.edu	Undergraduate
Sponsor Chair	Allie Decker	20410	agdecker@calpoly.edu	Undergraduate

Board meetings were held weekly on Tuesday evenings. Each Board member would present on their progress with the SDC project. The President would assign new tasks and alert the board of any competition updates.

### FACULTY & INDUSTRY ADVISORS

**Faculty Advisor:** Anahid Behrouzi, PhD  
**Affiliation:** California Polytechnic State University  
**EERI Member #:** 16564  
**Email:** [behrouzi@calpoly.edu](mailto:behrouzi@calpoly.edu)

## MEMBERS

A complete list of members is shown below. All Board members are not re-listed for brevity.

Name	EERI #	Email	Student Status
Nick Slavin	30222	nrslavin@calpoly.edu	Undergraduate
Sophia Ha	30226	soha@calpoly.edu	Undergraduate
Autumn Wagner	30229	agwagner@calpoly.edu	Undergraduate
Ashlea Evans	30228	aevans25@calpoly.edu	Undergraduate
Tomlinn Cox	30227	tmcox@calpoly.edu	Undergraduate
Jay Skaff	30224	dscaff@calpoly.edu	Undergraduate
Riley Denis	30225	rjdenis@calpoly.edu	Undergraduate
Tony Nguyen	30221	tnguy353@calpoly.edu	Undergraduate

## BUDGET & FINANCIALS

### Funding:

Sponsor Name/Organization	Contact Person	Amount
Cal Poly IRA Funding	Erika Clements	\$10,200.00
Harris and Sloan	Kellie Weisenberger	\$1,000.00
Coffman Engineers	Jim Amundson	\$300.00
<b>Total Funds:</b>		\$11,500.00

### Budget:

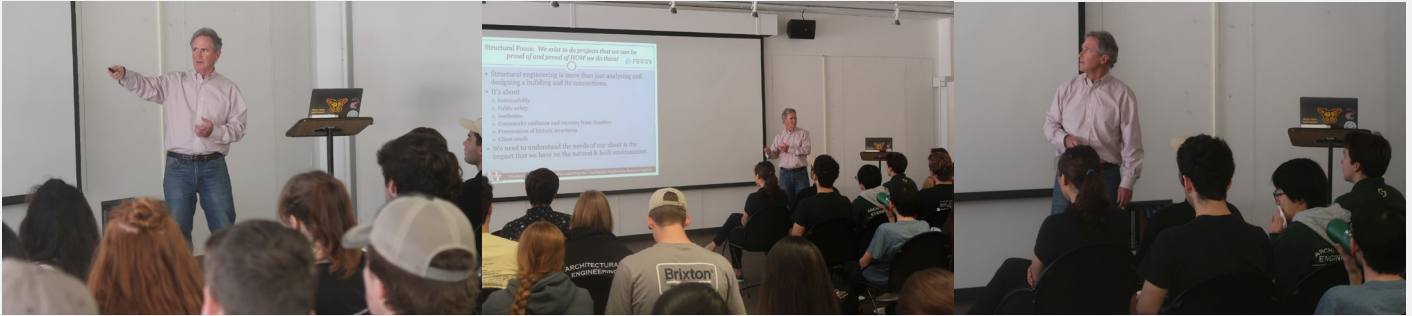
Category	Description	Detailed Description	Estimated Cost	Actual Cost
Faculty Advisor Costs	Flight	\$350.00 flight	\$350.00	\$330.98
	Food	\$50/day Monday-Friday	\$250.00	\$250.00
	Hotel	\$200.00 / night, 4 nights	\$800.00	\$844.56
Model Costs	Wood		\$600.00	\$516.50
	Glue		\$100.00	\$76.50
	Jigs		\$40.00	\$0.00
	Plywood		\$60.00	\$0.00
	Shipping		\$590.00	\$590.00
Student Travel and Competition Costs	Flights	\$209.00 / person	\$3,135.00	\$3,135.00
	Hotel	\$200.00 / night, 4 rooms, 4 nights	\$2,500.00	\$2,511.26
	Registration	\$500 for 4+\$125 per additional	\$2,000.00	\$2,000.00
	Walking Tour	\$20 for 10 people	\$200.00	\$200.00
	Insurance	\$60 for 17 people	\$960.00	\$960.00
<b>TOTAL</b>			\$11,585.00	\$11,414.80

## CHAPTER ACTIVITIES

- **Weekly Board Meetings:** 9/23 - 11/5/18, 11/26 - 12/3/18, 1/7- 2/19/19, and 4/15/19
- **SDC Construction Work Days:** 1/14-1/17/19, 1/21/19, 1/22-1/24/19, 2/1-2/4/19, 2/11-2/14/19, and 2/21/19
- **SDC Presentation Practices** (attended by faculty): 2/13/19, 2/18/19, 2/20/19, 2/25/19, and 2/27/19
- **SDC Travel Logistics Meetings:** 2/11/19 and 2/26/19

## FRIEDMAN FAMILY VISITING PROFESSIONAL VISIT

Visiting Professional David Cocke came to Cal Poly on May 2<sup>nd</sup>, 2019. He lectured at the Cal Poly SEAOC Student Chapter Weekly Meeting, met with graduate students, toured the High Bay Laboratory facility, attended a Mini-Grad Symposium, met with the EERI SDC Team, and spoke with faculty in one-on-one meetings.



## BUILDING AN ENGINEER DAY

The Student Chapter participated in the Society of Women Engineer's college-wide outreach event, Building an Engineer Day. Middle school students came to the seismic design lab to build K'NEX models that were tested on a shake table. The EERI SDC Team taught students what a structural engineer does and basic earthquake engineering principles.

## SEISMIC DESIGN COMPETITION TEAM

The Student Chapter is fully dedicated to producing a highly competitive SDC Team. All members of the chapter are either a part of the construction team or serve as a board member. The Student Chapter Board is structured around creating captains and co-captains for each part of the competition.

### SDC Team Members

The SDC Team consisted of all the officers and members previously listed. All officers served the roles previously mentioned, and all other members served as officer shadows. This allows the board members to relay important information to next year's leadership throughout the year and at the competition.

### SDC Team Financial Sponsors

A list of financial sponsors for the SDC team can be found above in Budget and Financials.

### Team results and lessons learned

Describe the results of your SDC Team. How did your structure perform in the competition? Include any photos. Describe lessons learned about the processes and areas for future improvement. Note this report will be published live on the EERI website, so avoid any mention of ideas for future designs that could compromise the competitiveness of your team in coming years.

#### Competition Results:

The Student Chapter placed 1<sup>st</sup> in Poster Design and 3<sup>rd</sup> in Architecture.

The balsa wood structure withstood Ground Motion 1 and Ground Motion 2 with no visible damage.

## Lessons Learned:

The Student Chapter learned that it must have a greater awareness of the process of ordering and receiving the balsa wood. The order took longer than anticipated to be finalized this year and that left less time for study models and the final balsa wood structure to be constructed.

The Student Chapter needs to make a greater effort to reach out to and involve underclassmen. In order to ensure the success of the Student Chapter in the Seismic Design Competition in the years to come, underclassmen need to be shown the benefits of being involved and see the process of designing, building, and analyzing the structure early in their involvement.

The Student Chapter learned that there needs to be greater coordination and communication between each of the Design, Construction, and Analysis Teams. More overlap between each team's responsibilities would increase communication and minimize issues with constructability and deadlines and make the process from proposal to final model more seamless.

## ELECTION & ELECTION RESULTS

An election for officers for the 2019-20 academic year was held in June 2019. The table below shows the new officers appointed to the Chapter board who will take office on June 2019.

<b>Role</b>	<b>Name</b>	<b>EERI #</b>	<b>Email</b>	<b>Student Status</b>
President	Ryan Millward	30197	rmillwar@calpoly.edu	Undergraduate
Vice President	Tomlinn Cox	30227	tmcox@calpoly.edu	Undergraduate
Construction Co-Captain	Riley Denis	30225	rjdenis@calpoly.edu	Undergraduate
Construction Co-Captain	Garrett Barker	N/A	gabarker@calpoly.edu	Undergraduate
Analysis Co-Captain	Ryan Thornton	30168	rdthornt@calpoly.edu	Undergraduate
Analysis Co-Captain	David Colman	N/A	dcolman@calpoly.edu	Undergraduate
Design Co-Captain	Nick Slavin	30222	nrslavin@calpoly.edu	Undergraduate
Design Co-Captain	Sophia Ha	30226	soha@calpoly.edu	Undergraduate
Materials Captain	Thomas Little	N/A	tjlittle@calpoly.edu	Undergraduate
Treasurer	Tony Nguyen	30221	tnguy353@calpoly.edu	Undergraduate
Social Chair	Autumn Wagner	30229	agwagner@calpoly.edu	Undergraduate
Sponsor Chair	Allie Decker	20410	agdecker@calpoly.edu	Undergraduate
Graduate Advisor	Jenna Williams	19349	jwill107@calpoly.edu	Graduate

N/A = Not assigned yet

## FEEDBACK FOR EERI

This section is for questions, requests, and/or feedback directed toward EERI or EERI staff.

## LIST OF ATTACHMENTS

Included at the end of this report are various attachments to supplement the information included above. A list of the attachments is included below:

- Item 1, flier for Friedman Family Visiting Professional Program

**ITEM 1**

The poster features a blue background on the left and a photograph of a domed ceiling with intricate geometric patterns and a central circular medallion on the right. The text is arranged as follows:

**THIS WEEK IN SEAOC**

**DAVID  
COCKE**

**STRUCTURAL FOCUS**

**THURSDAY MAY 2ND**  
**11AM**  
**KTGY**  
**CHIPOTLE**