

2014-2015 ANNUAL REPORT

New Mexico State University

Student Chapter

of the Earthquake Engineering Research Institute

Report Date: June 26, 2015



This report summarizes the membership and activities conducted by the New Mexico State University Student Chapter of the Earthquake Engineering Research Institute during the 2014-2015 academic year.

MISSION & GOALS

Mission Statement

Recent disasters which have claimed the lives of many and destroyed a vast amount of property have highlighted the importance of the role engineers play in the mitigation of these catastrophic events. It is critical that engineers are aware of the increasing threat of natural hazards along with the methods used for their mitigation. These issues are addressed in graduate studies at NMSU, however, a vast majority of the undergraduate students are unaware of the efforts taking place in the field of earthquake engineering. For this reason, EERI@NMSU will be formed, providing students at NMSU with the opportunity to learn about and be involved with the advancements taking place in Earthquake Engineering. This will better prepare students for the challenges they will face in their careers.

The affects of earthquakes are not limited to just the engineering community, but rather they affect every aspect of human life. For this reason, this organization will be committed to educating and increasing awareness of natural hazards and mitigation techniques throughout our campus and community.

The parent of organization of EERI@NMSU , EERI, is a national, nonprofit, technical society whose objective is to reduce earthquake risk by advancing the science and practice of earthquake engineering, improving understanding of the impact of earthquakes on the physical, social, economic, political, and cultural environment, and advocating comprehensive and realistic measures for reducing the harmful effects of earthquakes.

Goals of the EERI/NMSU Student Chapter:

Community Outreach:

'Shakes and Quakes'

One of the main focuses of the EERI@NMSU chapter will be creating a community outreach program called 'Shakes and Quakes'. The main objective of this outreach program is to stimulate young minds and allow them to better understand the way civil engineering structures respond to severe earthquakes.

Members of EERI@NMSU will visit local area elementary schools and through the use of a portable shake table, will demonstrate the effects of earthquakes on both concrete and steel structures. In order to demonstrate the behavior of a concrete structure, the students will build structures out of LEGOs and for the demonstration of response of a steel building, structures made out of K'nex will be constructed. The LEGO and K'nex models are then tested on the shake table to see how they respond under real earthquake ground motions.

This project lasts about three weeks, with two weeks devoted to planning and building the LEGO and K'Nex structures. The first and last class will be led by EERI@NMSU members, while the teacher will be responsible for conducting the discussions and group activities that occur in the second and third weeks. During the first visit by the EERI@NMSU members, the students will receive a project handout, building supplies, a general overview of earthquakes and the project assignment. A presentation will be given by EERI@NMSU members which highlights the importance of understanding how bridges and buildings respond to earthquakes. During the two weeks, groups of about four students will be formed in order to build an earthquake-proof building out of Lego blocks. Each student on the team will have a specific role. One student will be the owner of the building, one the architect, another an engineer, and the last person will be the builder. This emphasizes the importance of working together and teamwork in order to accomplish a task.

This outreach program will allow graduate students to share their passion for earthquakes and engineering to inspire K-12 students, getting them interested in math, science, and engineering.

Guest Speakers:

The EERI@NMSU student chapter will host seminars by outside speakers at least once a semester. Invited speakers will include a current EERI Distinguished Lecturer, practicing engineers through EERI's Friedman Family Visiting Professional Program, and local earthquake

professionals. Hosting these seminars will allow NMSU students to engage in current practices in earthquake engineering research and education along with providing networking opportunities with earthquake engineering professionals. Along with the seminar, the EERI@NMSU Student Chapter will arrange social activities (e.g., dinner with faculty and/or graduate students) giving the distinguished lecturer an opportunity to discuss both professional and personal experiences.

Collaboration with other undergraduate student organizations:

Typically, EERI is a student organization for graduate students, but encourages interaction between the other organizations in the Department of Civil Engineering (i.e., the American Society of Civil Engineers Daniel B. Jett Student Chapter and Chi Epsilon Civil Engineering Honor Society). The EERI@NMSU Student Chapter will coordinate with both ASCE and Chi Epsilon for the seminar series, outreach activities, and social activities.

MEMBERSHIP

The New Mexico State University Student Chapter had a total of 3 members in 2014-2015.

OFFICERS

The Board consisted of the following members:

| Role | Name | EERI Member Number | Email | Student Status |
|-------------|---------------------|---------------------------|------------------------|-----------------------|
| President | Mark Manning | 15633 | mpmann@nmsu.edu | Graduate student |
| | | | | Undergraduate student |
| | | | | |

Board meetings were held...

{Consider including any images of the officers here.}

FACULTY & INDUSTRY ADVISORS

Brad D. Weldon, PhD, Assistant Professor, New Mexico State University, bweldon@nmsu.edu, 575-646-1167

Nathan Mensay, PE/SE, Associate Partner, Chavez-Grieves Consulting Engineers, Inc.

MEMBERS

A complete list of members is shown below.

| Name | EERI Member Number | Email | Student Status |
|---------------|--------------------|-------------------|------------------|
| Mark Manning | 15633 | mpmann@nmsu.edu | Graduate student |
| Tamara Cortez | 15640 | cortezt@nmsu.edu | Graduate student |
| Louis Romero | 15940 | louisrom@nmsu.edu | Graduate student |

BUDGET & FINANCIALS

Briefly describe the chapter budget and financials, with text description or any tables and charts as needed.

List any financial sponsors of your chapter.

| Sponsor Name/Organization | Contact Person | Amount |
|---------------------------|----------------|--------|
| | | |
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CHAPTER ACTIVITIES

Describe chapter meeting activities including, at a minimum, a summary statement of the meetings held during academic year, giving the date of each, the attendance, the principal meeting activity, the invited speaker (if there is one) and his or her subject, and any other pertinent information about the meeting activity. Consider including images for each activity in this section, and consider adding any fliers, documents or other supporting information in an appendix as needed. The section headers below are intended to be a guide to help you organize information about your activities, however feel free to edit them as necessary to best reflect your chapter's activities.

REGULAR CHAPTER MEETINGS

Chapter meetings were conducted once a month during the fall and spring semesters. Each meeting consisted of discussing upcoming outreach and community service projects, as well as ideas for fundraising and increasing student awareness of our organization.

FRIEDMAN FAMILY VISITING PROFESSIONAL or DISTINGUISHED LECTURE VISIT

NA.

{Special Activity #1}

The chapter participated in an NMSU community service project called Keep State Great. Members helped to clean revitalize the campus and surrounding community by picking up trash and painting curbs.

{Special Activity #2}

The NMSU Chapter of EERI was honored to host a guest lecture for members and students provided by Mr. Jon Lindsay. An alum of NMSU and US Air Force veteran, Mr. Lindsay led an exciting career first as a civil engineer followed by stints as CEO and County Judge of Harris County, Texas, as well as serving as a Texas State Senator. His presentation was directed at sharing his unconventional career and advice with students in an effort to encourage more diverse career paths.

{Special Activity #3}

Member of our chapter participated in an outreach program with the Dream Makers Program of NMSU in which elementary students visited campus and participated in a presentation and activity with EERI. The presentation highlighted the many career paths available in civil engineering, and was followed by an activity where students build and load bridges constructed from pennies, learning and using simple engineering concepts to more efficiently build their bridge.

SEISMIC DESIGN COMPETITION TEAM

Brief description of SDC effort at your university.

SDC Team Members

A complete list of members is shown below.

| Name | EERI Member Number | Email | Role |
|------|--------------------|-------|------|
| | | | |
| | | | |
| | | | |

SDC Team Financial Sponsors

A list of financial sponsors for the SDC team.

| Name | Email | Amount | Note |
|------|-------|--------|------|
| | | | |
| | | | |
| | | | |

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.

ELECTION & ELECTION RESULTS

An election for officers for the 2014-2015 academic year was held in May 2015. The table below shows the new officers appointed to the Chapter board who will take office on August 2015.

| Role | Name | EERI Member Number | Email | Student Status |
|---------------------|-----------------------|---------------------------|--------------------------|-----------------------|
| President | Cory Powell | TBD-new member | cpowell4@nmsu.edu | Graduate student |
| Vice-President | Claire Thomson | TBD-new member | clairebt@nmsu.edu | Graduate student |
| Treasurer/Secretary | Ruben Diaz | TBD-new member | rdiaz22@nmsu.edu | Graduate Student |

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, i.e. flier for event
- Item 2, professional slide show or other handouts
- Item 3, other items

Insert any pdfs of these documents in your final report.