

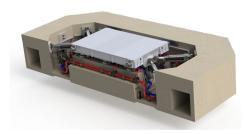
National Science Foundation





# **Education and Community Outreach**

### Lelli Van Den Einde, NHERI@UC San Diego ECO Director



NHERI@UC San Diego User Training Workshop



December 16-17, 2021 University of California, San Diego



## NHERI@UC San Diego ECO Goals

1. To support technology transfer to practitioners and future engineers and promote implementation of research results into practice.

2. Highlight innovative research conducted at NHERI@UC San Diego facilities

3. Demonstrate the benefits of research to the public and critical decision makers



Tours & Professional Development Workshops

Jacobs School Media Relations Group



## NHERI@UC San Diego ECO Goals

4. Engage students and broaden participation of groups typically underrepresented in STEM

- 5. Professionally develop undergraduate and graduate students
- <image>

UC San Diego's Seismic Outreach Ambassador Program

EERI SESI Classroom Education & Outreach <u>https://www.eeri.org/schools/sesi</u> <u>-classroom-education-and-outreach</u>

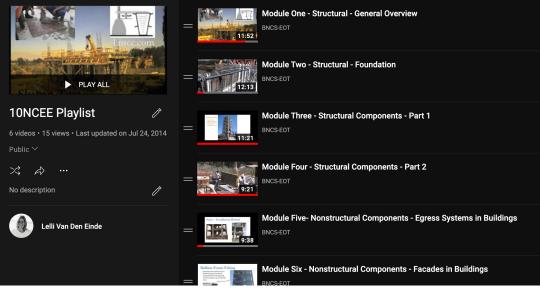
6. Provide unique and stimulating experiences for undergraduates in high-quality engineering research



NHERI REU program

## Proposal Ideas for ECO

- Use footage of experimentation and make powerful educational videos for undergraduate and graduate courses (bring your research into the classroom).
- Leverage existing curriculum or develop your own for outreach to encourage younger URM students to go into structural engineering.
- Develop Blind Predictions for students to participate in modeling prior to your experimental program.



### Link to example educational videos

### 2021 Reinforced Concrete Column Blind Prediction Contest

### Quasi-Static Cyclic Test of an RC Column: Blind Prediction Invitation



#### Invitation

We invite you to participate in the prediction of the response of a reinforced concrete column subjected to lateral deformation. This invitation is based on an experimental test of a concrete column conducted in 2020, the results of which have not yet been published. The test column is representative of gravity columns common in concrete buildings designed prior to the 1990s. <u>Tipping</u> <u>Structural Engineers</u> and <u>Maffei Structural Engineering</u> designed the test column. The column was built and tested by <u>Simpson Strong-Tie</u> at the Tyrell Gilb Research Laboratory in Stockton, California.

In addition to providing your own prediction, please share this invitation with your colleagues and encourage them to participate. We designed the response form to be short, with the objective of minimizing the time required to participate. Participation requires predicting only a few quantities (strength, stiffness, deformation capacity, and behavior mode) for one cyclic-static test.

We envision that most entrants will use hand or spreadsheet calculations from approaches defined in building codes, guidelines, or published research, perhaps spending just a few hours to make their predictions. But any approach is allowed, and numerical modeling approaches are also welcome.

The invitation is open to anyone in the structural engineering field. We hope to

#### Important Dates:

- Contest opens: July 21, 2021
- Deadline for questions: August 19, 2021
- Deadline for submissions extended to: October 13, 2021, 11:59PM (Pacific)
- Winners Announced: November 23, 2021

# Building it Better: Earthquake Resilient Hospitals for the Future



30 minute professional video documenting the project from start to finish & relating it to the importance of hospital resiliency – geared towards society at large.





San Diego: UCSD-TV http://www.ucsd.tv/



Worldwide: UC-TV http://www.uctv.tv/



## NHERI 4 Kids

