



Education & Community Outreach



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Overview

- **ECO Goals**
- **Technology Transfer**
- **Media Relations**
- **Seismic Outreach Ambassador Program**
- **NHERI REU Program**
- **Professional Development of Graduate Students/Post-Docs**

NHERI@UC San Diego ECO Goals

- **To support technology transfer to practitioners and future engineers and promote implementation of research results into practice. (WBS 1.5.1)**
- **Highlight innovative research conducted at NHERI@UC San Diego facilities (WBS 1.5.2)**
- **Demonstrate the benefits of research to the public and critical decision makers (WBS 1.5.2)**
- **Engage students and broaden participation of groups typically underrepresented in STEM (WBS 1.5.3)**
- **Professionally develop undergraduate and graduate students (WBS 1.5.3 and 1.5.4)**
- **Provide unique and stimulating experiences for undergraduates in high-quality engineering research (WBS 1.5.4)**

Technology Transfer (WBS 1.5.1)

➤ Webinars

- To highlight and disseminate research findings
- Targeted participants include members from NHERI community, professional chapters of ASCE, ACI, SEAOSD and EERI, and membership from diversity organizations such as SHPE, SWE, and NSBE
- Supported by NHERI CI infrastructure
- Presentations will be recorded and made available to the broader NHERI community.



<https://ww2.frost.com/files/6814/9008/8504/webinar.jpg>

Technology Transfer (WBS 1.5.1)

➤ Project Videos

- Increase awareness of NHERI@UC San Diego capabilities and disseminate project results
- Target different audiences
- Undergraduate students will help film, edit and produce the short videos from footage from experiments
- Project PIs and participating students will be interviewed
- Videos will be shared and disseminated through NHERI website making them broadly available to a wide diverse audience.

➤ Lab Tours



Tech Transfer: Lab Tours



Visiting Students and Engineers from Mexico

NHERI @ UCSD Workshop, 11 December, 2017

Tech Transfer: Lab Tours



Visiting architects from AIA San Diego chapter

NHERI @ UCSD Workshop, 11 December, 2017

Media Relations (WBS 1.5.2)

- **NHERI@UC San Diego will work with the Jacobs School of Engineering Media Relations team**
 - Provide On-site advising to PI and their home institution media relations group mentoring them on best practices for publicizing their research.
 - Guide the PI's media relations groups on developing press releases, reaching out to science, technology and mainstream media such as TV networks, magazines, newspapers blogs and social media.
 - Collaborate with the NSF press office and the NHERI publicity liaisons

JACOBS SCHOOL MEDIA RELATIONS TEAM

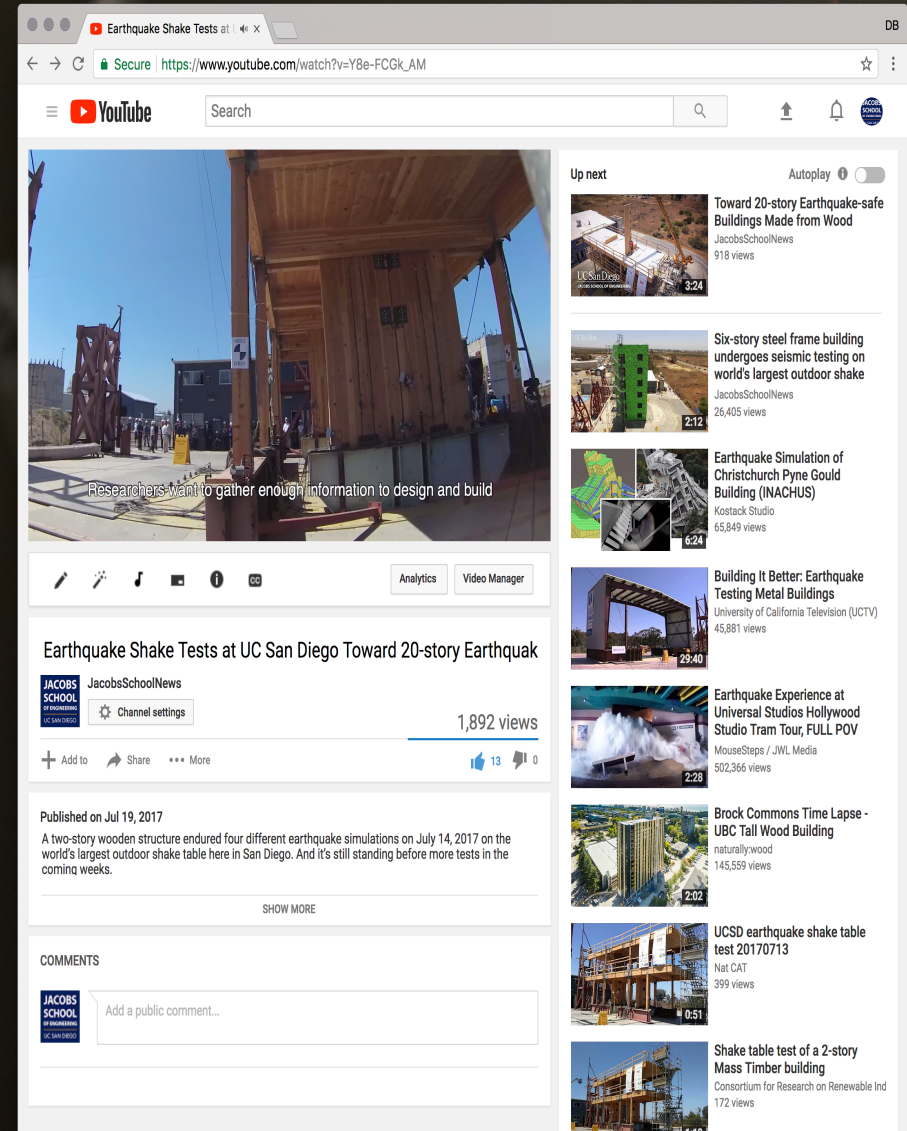


What we do

- **Distribute press releases from other institutions to local/California media outlets**
- **Support media days: create media advisory/distribute/onsite “day of”**
- **Pitch local and California reporters (time permitting)**

Video/Photography (time permitting)

- Video and photo shoot of the tests to hand out to institution's public relations office and media
- Video and photo shoot during media days



SUCCESS STORIES

Some examples of media coverage

Science Magazine

[These disaster machine could help humanity prepare for cataclysms](#)

ABC News

["Six-story Building Put to Earthquake Test"](#)

Daily Mail UK

["Researchers to simulate 1994 LA quake that killed 60 on giant 'shake table' to test design for quakeproof wooden building"](#)

Discover Magazine

[Bracing for Mother Nature's Wrath](#)

UCSD Media Page

- **Jacobs School of Engineering Shake table media page**

<http://jacobsschool.ucsd.edu/shaketable/index.sfe>

Seismic Outreach Ambassador Program (WBS 1.5.3)

- **Educating 4th-6th grade students on fundamentals of earthquakes and earthquake-safe structural design**
 - Students build and test K'Nex structures in a design competition
- **Run by volunteer undergraduate students (Ambassadors)**
 - Provides Ambassadors with professional development training
- **Goals of the program**
 - Providing outreach to younger students to enhance recruitment into STEM fields
 - Exposing undergraduates to the larger university community consisting of donors, industry partners, and university alumnae
 - Developing group of high-achieving engineering student leaders with strong soft skills (teamwork, communication, conflict resolution, time management, flexibility and motivation of others)
- **Visiting graduate students/post-docs can participate in this program**

NHERI 4 Kids

- **Seismic Outreach to Chula Vista and Vista Elementary school districts**
 - High population of underrepresented minority students; low income (free or reduced lunch)
- **Presentation in their classrooms**
- **Provided instructional scaffolding to teachers**
- **Two day shake table event**
 - Wed Aug 31, 2016: Chula Vista (135 students)
 - Fri Sep 2, 2016: Vista (100 students)

NHERI 4 Kids



Kids arriving, checking in, safety meeting.



Lunch!!!



Being interviewed about their designs



Engaged students

NHERI 4 Kids



Rotation 1: Videos of past tests



Rotation 2: Tour of facility above ground



Rotation 3: Tour of facility below ground



Rotation 4: Make Your Own Earthquake

NHERI 4 Kids



Rotation 5: Placement of structures on shake table (Downtown San Diego)

NHERI 4 Kids



NHERI 4 Kids



NHERI REU Program (WBS 1.5.4)

- **Provide unique and stimulating experiences in high-quality engineering research**
 - UC San Diego has extensive experience with the REU program, selecting students, mentoring, and assisting with logistics.
- **Support at least 2 REU students every summer**
 - 10 week research program
 - Undergraduates are immersed in the research teams and participate in construction, instrumentation, testing, and analysis.
 - Students work closely with graduate students and PIs to identify appropriate research projects that they can conduct individually but are integrated with the overall project goals
 - ✓ Testing material properties to make material selections
 - ✓ Modeling parts of the structure to predict response.

NHERI REU Program (WBS 1.5.4)

- **4 ugrads this summer working on Pei's project**
 - 3 from NHERI REU program and 1 from Taiwan (UCSD International Summer Research Program)



Professional Development of Graduate Students

➤ **Honing Research Skills**

- Facility will provide visiting students training on large-scale testing protocols, instrumentation, safety, data acquisition and reduction.

➤ **Learning Mentoring Skills**

- Participation in the Seismic Outreach Ambassador program or the NHERI REU program will provide opportunities for graduate students to mentor undergraduate students

➤ **Improving Communication Skills**

- Working with the facility to develop project videos, graduate students will learn to communicate their research to different audiences (general public, decision makers, students, researchers)



Questions?

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Workshop Survey

<https://docs.google.com/forms/d/e/1FAIpQLSeHPFnDEVXeW8M-hSwG3eX00WPic6ZL7v-2iufC1fR5Zhuizg/viewform>

