

# **NHERI- Network Independent Advisory Committee (NIAC)**

**Topic:** NIAC Meeting in Year-3

**Location:** NHERI Summer Institute, San Antonio TX

**Room:** El Paseo A Room

**Time:** June 7, 2019 -- 1:30-4:30 PM CT

## **Webex Meeting Details:**

Title: NIAC-Facilities Meetings and NIAC meeting SI\_6-7-19

Location: <https://purdue.webex.com/purdue>

When: Friday, June 7, 2019 9:30 AM – 4:30 PM Central

Organizer: webex <messenger@webex.com>

Description: JOIN WEBEX MEETING <https://purdue.webex.com/purdue/j.php?MTID=ma4c49f3c0ccd85b4b93fd5dd1ceadfe7>  
Meeting number (access code): 647 124 033

## **Minutes**

1. Welcome, Attendance and Review of action items and approval of the previously distributed Minutes of the 2-9-18 Meeting (John van de Lindt)

### Attendance:

Lesley Ewing (Coastal Engineering, Social Sciences and Policy, California Coastal Commission)  
William Hansmire (Geotechnical Engineering, Parsons Brinckerhoff Inc.)  
Farzad Naeim (Earthquake Engineering, University of California, Irvine) (Remote)  
Catherine Petroff (Coastal Engineering, US Army Corps)  
John van de Lindt (Wood Earthquake Engineering, Colorado State University)  
Peter Vickery (Wind Engineering, Applied Research Associates)  
Richard Woods (Geotechnical Engineering, University of Michigan)

Minutes of 2-9-18 were approved as distributed.

2. NSF Remarks (Joy Pauschke- departs at 2:15 PM)

Dr. Pauschke provided a retrospective look from NEES to NHERI and elaborated on the role of the NCO. The NIAC members followed up the remarks with a series of follow-up questions.

Question 1: How to keep the momentum of 3 years of investment at the end of the Year 5 agreement?

Response: Working on it internally and it is not ready yet, probably not too much longer.

Question 2: How to integrate social sciences with physical sciences?

Response: Pursuing this through several programs encouraging researchers to apply for funding:  
(i) Humans and the Built Environment, (ii) CONVERGE, (iii) Leap-High and other funding opportunities.

3. User Forum joint meeting (User Forum Representatives- Alamo Boardroom) (2:30 PM)  
Not attended by NCO

4. NCO Annual Report Highlights and NHERI Priorities in Y4 (Julio Ramirez, JoAnn Browning, Cheryl Ann Blain)

Julio Ramirez, JoAnn Browning and Cheryl Ann Blain provided the update and the slides are attached to the Minutes. The NIAC will provide specific recommendations in the annual report. The NCO will provide responses to be discussed at the next NIAC meeting.

5. NIAC Plans for Y4 (All)

- a. Individual meetings with facilities at the Summer Institute.

The NIAC has been holding individual meetings with the facilities after attending presentations on each one during the Summer Institute. The schedule of meetings is attached to the minutes.

- b. Year 3 Report

NIAC will begin work on the Year 3 report to the NCO.

6. Schedule of Meetings in Y4

Next meeting will be scheduled between now and the next Summer Institute. The meeting will be held via teleconferencing.

7. New Business

No new business.

8. Adjourn

Meeting adjourned at 4:00 PM CT



Natural Hazards  
Engineering  
Research  
Infrastructure



---

# NHERI-NCO

## NHERI-Network Coordination Office

### CMMI-1612144

NIAC Update  
Year 3 Activities and Plans for Year 4  
June 7, 2019  
San Antonio, Texas

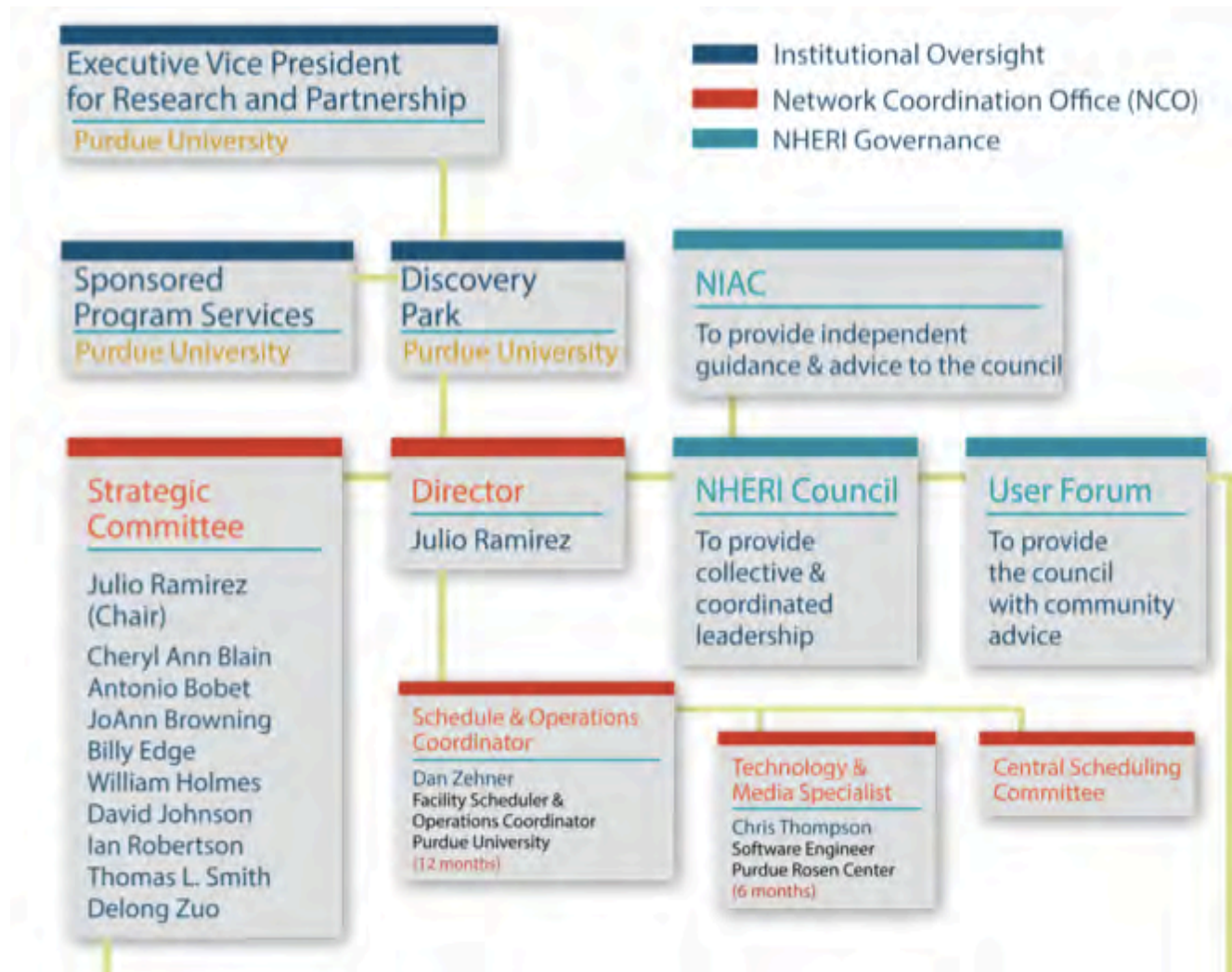


# NSF's Facilities/Programs





# NCO Governance and Operations







# NCO Leadership Team



## **Julio Ramirez (PI)**

*Professor of Civil Engineering  
Purdue University*

### **Leadership Role and Expertise**

- NCO Director
- Chair, NCO Strategic Committee
- [Link to Lehigh \(EF\)](#)



## **Billy Edge (Co-PI)**

*Professor of Practice  
North Carolina State University*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Expert in Coastal Engineering, Inundation, Wave Dynamics, and Surge Impact Modelling
- [Link to Oregon State \(EF\)](#)



## **Antonio Bobet (Co-PI)**

*Professor of Civil Engineering  
Purdue University*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Leader for Geotechnical Engineering
- [Link to User Forum](#)



## **Delong Zuo (Co-PI)**

*Associate Professor of Civil Engineering  
Texas Tech University*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Expert in Wind Hazard Research
- [Link to Wind Experimental Facilities](#)



## **JoAnn Browning (Co-PI)**

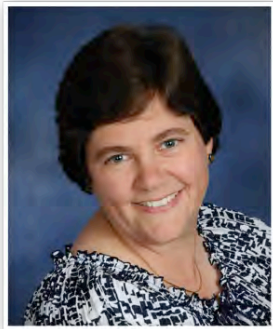
*Dean of Engineering  
University of Texas at San Antonio*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Leader for Education and Community Outreach



# NCO Leadership Team



## **Cheryl Ann Blain**

*Research Oceanographer  
Naval Research Laboratory*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Leader in Coastal Engineering Hazards
- Communications and Outreach Lead
- Link to SimCenter and DesignSafe



## **Thomas L. Smith**

*Architect  
TLSmith Consulting Inc.*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Leader in Wind Engineering and Architectural Practice
- Link to UW RAPID (EF)



## **William T. Holmes**

*Structural Engineer, Private Practice  
Oakland, California*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Leader in Earthquake Engineering Structural Practice
- Chair of TTC



## **David R. Johnson**

*Assistant Professor of Industrial  
Engineering and Political Science  
Purdue University*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Leader in Social Sciences and Policy
- Link to User Forum



## **Ian Robertson**

*Professor of Structural Engineering  
University of Hawaii, Manoa*

### **Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Expert in Tsunami Research
- TTC Ex-officio NCO Member



# Education & Community Outreach



**JoAnn Browning** (Co-PI)  
*Dean of Engineering*  
*University of Texas at San Antonio*

**Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Leader for Education and Community Outreach



**Cheryl Ann Blain**  
*Research Oceanographer*  
*Naval Research Laboratory*

**Leadership Role and Expertise**

- Member, NCO Strategic Committee
- Leader in Coastal Engineering Hazards
- Communications and Outreach Lead
- Link to SimCenter and DesignSafe



**Karina Vielma-Cumpian**  
*Assistant Research Scientist*  
*University of Texas at San Antonio*

**Leadership Role and Expertise**

- Education Specialist with ECO



**Marti LaChance**  
*Purdue University*

**Expertise**

- Communications Specialist



**Lynn Holland**  
*Purdue University*

**Expertise**

- Marketing Design





# NCO Professional Staff at Purdue

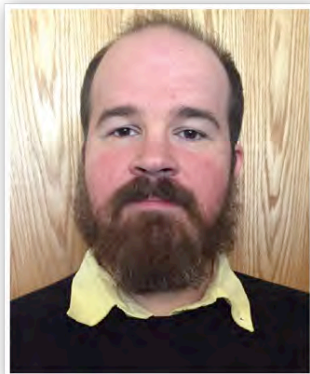


## **Daniel Zehner**

*Facility Scheduler and  
Operations Coordinator (FSOC)  
Purdue University*

### **Leadership Role and Expertise**

- Coordination of Day to Day Operations
- Oversee, Maintain, and Manage Centralized Experimental Facilities Schedule
- Link to UC Davis, UC San Diego, and UT Austin (EFs)



## **Chris Thompson**

*Technology and Media Specialist  
Rosen Center, Purdue University*

### **Leadership Role and Expertise**

- Publicize Research and Other Deliverables; Implement Software Tools in Partnership with Cyberinfrastructure Awardee



# NCO Strategic Goals in Year 3

- **Community Leadership**
  - Fair and Effective Governance
  - Science Plan Update and Dissemination
  - International Partnerships
  - Accelerate Transfer of Research to Practice
- **Coordination of NHERI Components**
  - Clear and Transparent Access Protocols
  - Effective Training and Dissemination of Research Capabilities
  - On time Scheduling
- **Education and Community Outreach**



*Storm surge, Hurricane Fran, North Carolina 1996*



# Work with the NHERI Council

- Identify ***key metrics*** that show the value of NHERI to its users
- Promote ***re-use of Data***
- ***Develop Next Generation*** of Leaders in the Field
- ***Disseminate impact*** of NHERI Work, and
- ***Accelerate Transfer of Research*** to Practice





# NIAC Recommendations in Year 2

## Facility Utilization

- Identify and implement separate mechanisms to monitor SimCenter and Rapid.
- Provide additional metrics such as early career faculty usage, simultaneous or repeat usage, etc.

## Dissemination

- Advertise in magazines such as Civil Engineering.
- Write articles in journals and newsletters such as STRUCTURE (ASCE-SEI) and GEOSTRATA (Geo-Institute-ASCE).
- Publicize NHERI activities with functional leads of ASCE7 and other code and guidance writing groups.





# NCO Response during Year 3

## Facility Utilization

- Identify and implement network wide metrics to illustrate the value of NHERI to its users. For example, information on early career faculty usage, simultaneous or repeat usage, etc.

## Dissemination

- Vigorous social media campaign and Podcasts.
- NHERI Newsletters and Weekly News Items.
- Activities of the Technology Transfer Committee.



# Technology Transfer Committee

## WHO

- Volunteer practitioners and decision makers
- Experienced in contributing to the development of design guidelines, technical briefs, building codes and standards and technical seminars

## WHAT

- Strengthen the tie between NHERI researchers and the implementers of NHERI–developed technology
- Review NHERI research results to identify findings that could immediately lead to improvements in the design process that will result in mitigation of risk due to natural hazards.



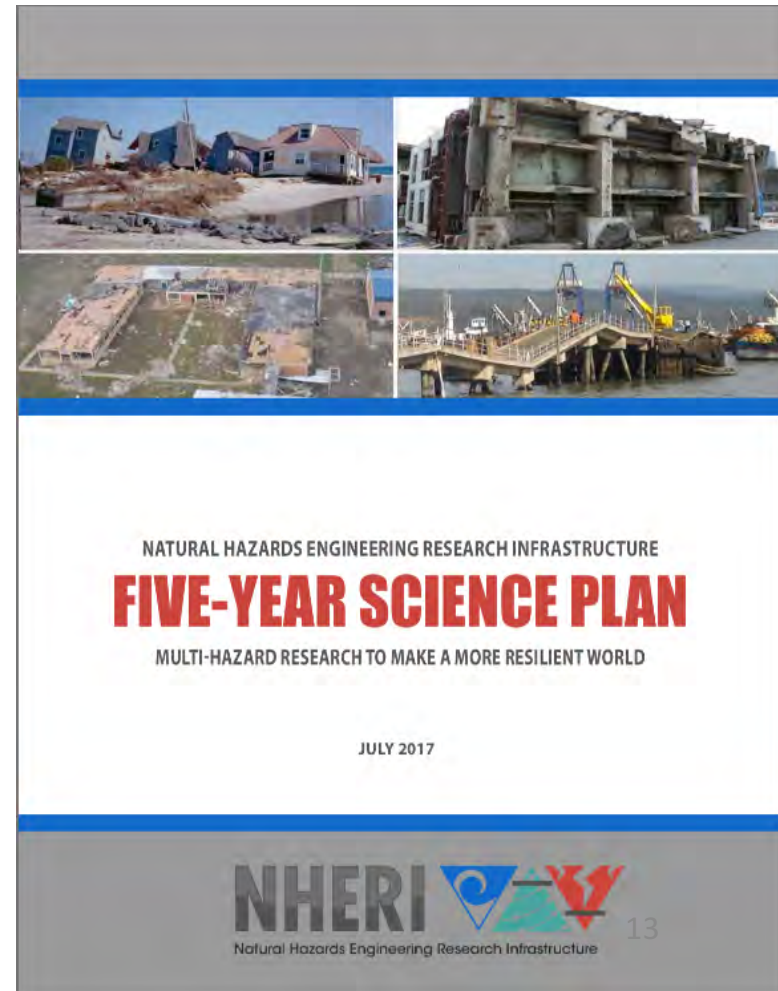
# NHERI Science Plan Purpose

A 5-year roadmap for high-impact, high-reward hazard engineering research at NHERI facilities

## Three Grand Challenges Remind Us

### Why NHERI Is So Vital

- Identify and quantify the characteristics of earthquakes, windstorms, and associated hazards (e.g., tsunami, surge, waves)
- Evaluate physical vulnerability of civil infrastructure and social vulnerability of populations in exposed communities
- Create technologies and tools to design, construct, retrofit, and operate sustainable infrastructure resilient to multiple hazards





# NHERI Science Plan Dissemination

- Available at <https://www.designsafe-ci.org/facilities/nco/science-plan/>
- Prominently linked from DesignSafe's front page
- Promoted through
  - NHERI Quarterly Newsletter (Summer 2017) and Monthly Recaps (multiple)
  - NHERI Summer Institute and REU programs
  - Conferences (ASCE, ASCE/SEI, AGU, 13<sup>th</sup> ACWE)
- Use of NHERI facilities encouraged in solicitations for Engineering for Civil Infrastructure (ECI) program





# NHERI Science Plan in Year 3

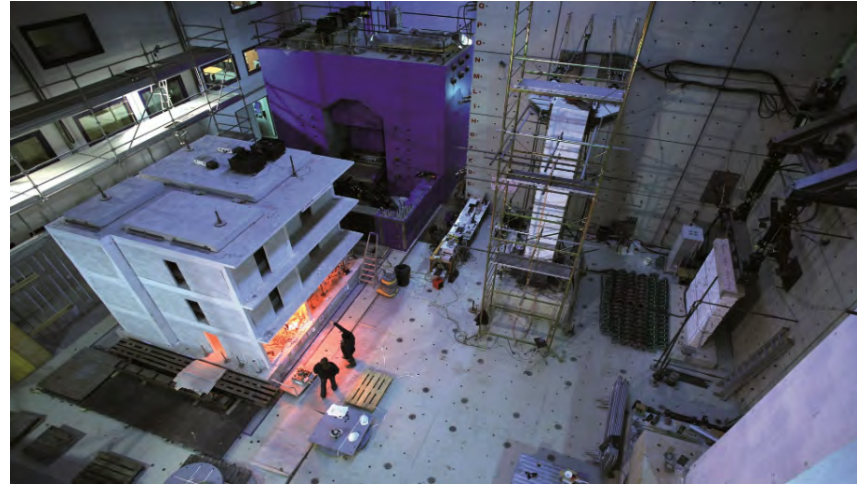
## A living document to be updated and maintained

- NSF Workshop proposed for March 2019
  - How to integrate transformative technologies into NHERI research
  - Gain broader perspectives from decision-makers, practitioners, international research community, and social scientists
  - Engage creative thinkers from related disruptive fields
    - Science of team-science, bio-inspired design, advanced computation, data science, materials science, robotics, control theory, additive manufacturing
    - Aimed at growing convergent research, one of 10 Big Ideas for Future NSF Investments (NSF 17-065)
  - Identify topics for possible research campaigns
- 2<sup>nd</sup> Edition of Science Plan to be published July 2019



# International Partnerships

- The Foundation EUCENTRE, European Centre for Training and Research in Earthquake Engineering ✓
- HR Wallingford Research Laboratory on Tsunami and Storm Surge Research (under NSF review)





# NHERI EF Access and Funding

- Access through NCO Centralized Facility Scheduling of user time (NSF-Supported and non-NSF-supported) at each Experimental Facility, including the RAPID.
- Funding:
  - NSF CMMI and other directorates
  - Other Federal and State Agencies
  - Industry



*Research Team at OSU Facility –  
Dan Cox, OSU PI*

***Researchers and EF managers have indicated a positive experience with the Facility Scheduling Dashboard and protocol***



# PROJECTS IN NHERI\*

Facility	NSF Funded Projects (Utilization Days)	Other Federal/State Agencies or Industry in NHERI Time	Projects in Non-NHERI Time
Oregon State University	17 (589)	2	1
UC Davis	15 (585)		1
UC San Diego	8 (472)		1
Lehigh University	24 (1413)		0
Florida International University	19 (463)		7
University of Florida	18 (391)	2	1
UT Austin	16 (439)		0
RAPID**	15 (257)		7
<b>Total</b>	<b>132</b>	<b>4</b>	<b>18</b>

\*Tracked by NCO from 2/1/2017 to 4/19/19

\*\*RAPID facility usage is from 9/1/18-4/19/19





# ECO Committee – Strategy & Function



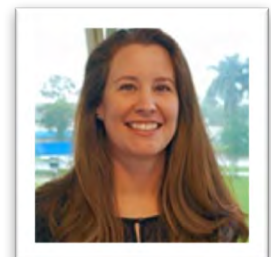
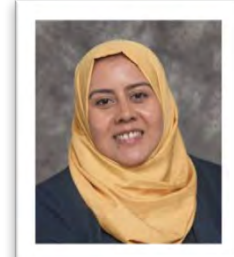
**Karina Vielma**  
UTSA, Chair



Mohammad Khosravi  
(UC Davis) & Elaina Sutley (KU)  
User Forum



Arindam Chowdhury, Amal Elsayad, Carolyn Roberson  
Florida International University



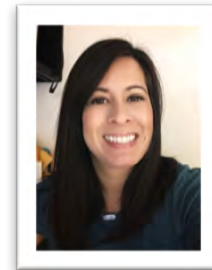
Chad Kusko  
Lehigh University



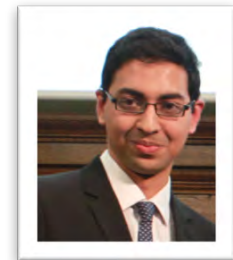
Pedro Lomonaco & Dan Cox  
Oregon State University



Matt Schoettler  
UC Berkeley



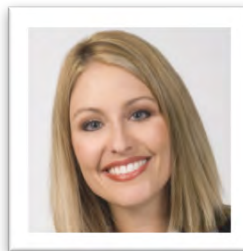
Mary Carrillo, Srikanth Madabhushi  
UC Davis



Lelli Van Den Einde & Joel Conte  
UC San Diego



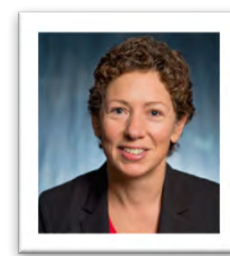
Kurtis Gurley  
University of Florida



Jamie Ellen Padgett  
(Rice)  
UT Austin-CI



Patricia Clayton  
UT Austin  
Shaker

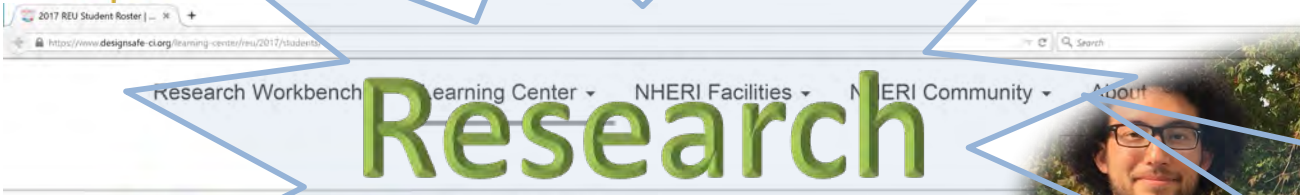


Laura Lowes & Joseph Wartman  
University of Washington

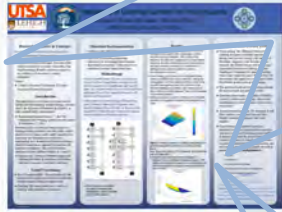




# Research Experiences for Undergraduates (REU)



## Research



### Melody Trejo

Home university: California State University, Fullerton  
 NHERI EF site: Lehigh University, ATLSS Engineering Laboratory  
 Faculty mentor: Dr. Spencer Quirk  
 Graduate student mentor: Safwan Al-Subaihi  
 Research project title: Resiliency of cladding systems for multi-hazards  
 Research paper: [Paper-Melody Trejo.docx](#)



### Caleb Wegener

Home university: Humboldt State University  
 NHERI EF site: Florida International University - Wall of Wind  
 Faculty mentor: Dr. Ioannis Zisis  
 Graduate student mentor: Farzaneh Raji  
 Research project title: Wind driven rainfall study on a full-scale model  
 Research paper: [Paper-Caleb Wegener.docx](#)

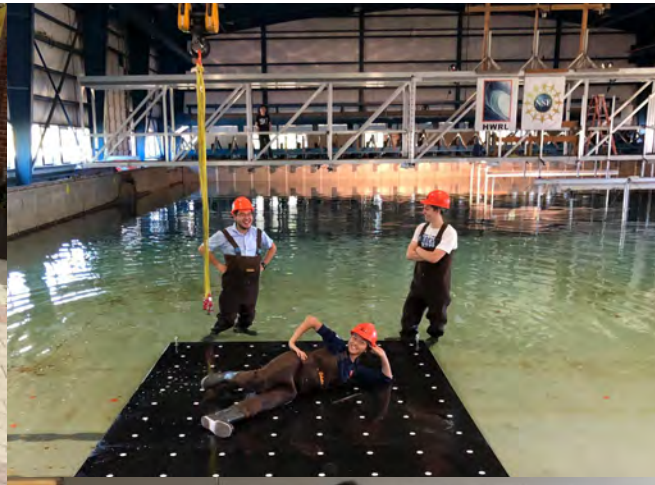
## Career Development



## Mentorship & Community





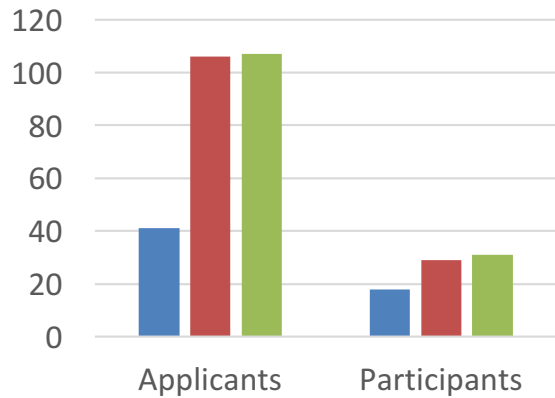


# REU Student Photo Contest

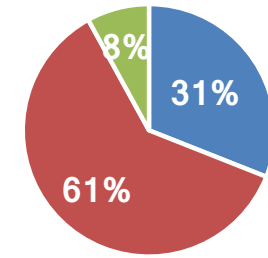
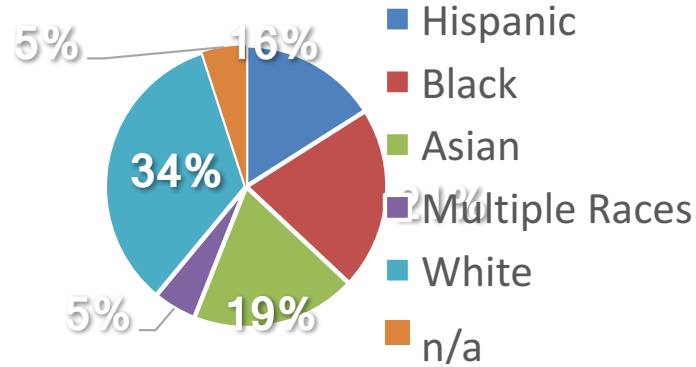




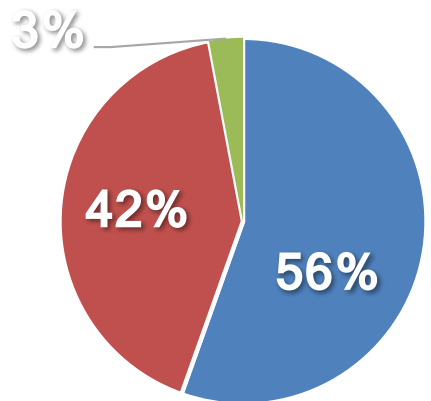
# NHERI REU – Participants' Attributes



■ Round 1 ■ Round 2 ■ Round 3



■ 1st Generation ■ Not 1st Gen  
■ Not available



N=77

■ Female  
■ Male  
■ Other

22



■ Round 1  
★ Round 2  
● Round 3



# NHERI Summer Institute

## Early Career Development



## Proposals & Reflection



## Community Building



## NHERI crowd Teams Linked & Networked



## NHERI Science Plan & Assets



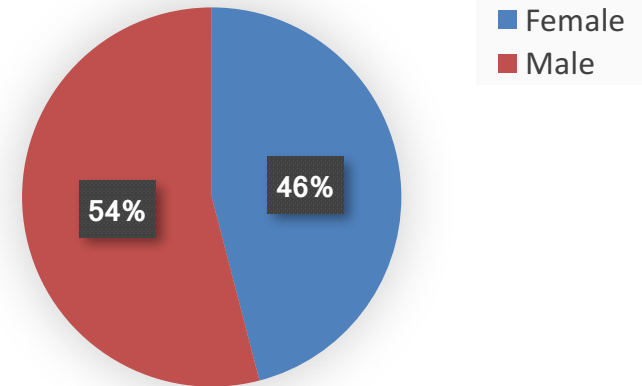
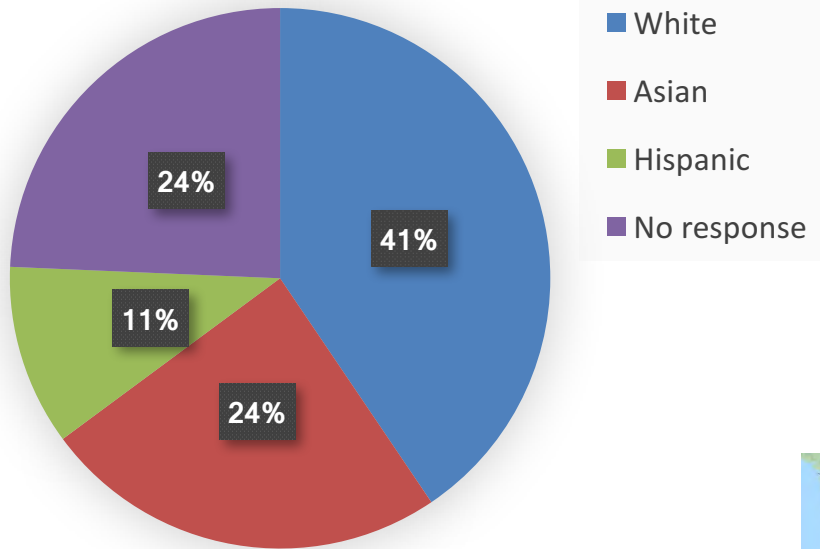
## Contribute & Learn



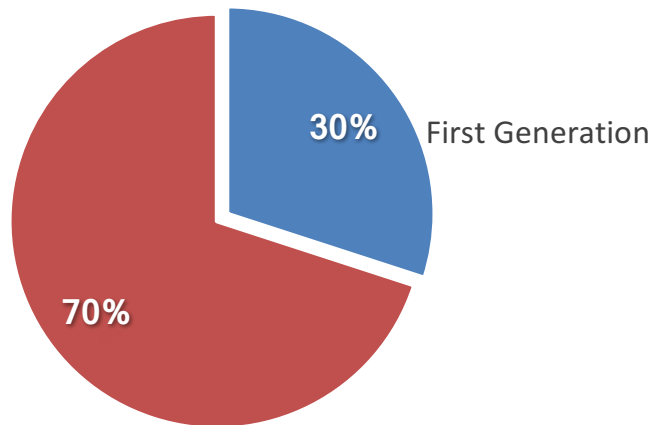




# NHERI SI – Participants' Attributes



n = 37





# NHERI Summer Institute

NHERI Summer Institute Day 1 Wednesday, June 5, 2019			NHERI Summer Institute Day 2 Thursday, June 6, 2019			NHERI Summer Institute Day 3 Friday, June 7, 2019		
Time	Description	Location	Time	Description	Location	Time	Description	Location
8:00-8:30am	<b>Breakfast</b>	Riverwalk Room	7:30-8:00am	<b>Breakfast</b>	Riverwalk Room	8:00-8:30am	<b>Breakfast</b>	Riverwalk Room
8:00-8:30am	<b>Registration</b> <i>Please sign in daily.</i>	UTSA Downtown Campus, Duran Building – Lobby	7:45-8:00am	<b>Registration</b>		8:00-8:30am	<b>Registration</b> <i>Please sign in daily.</i>	UTSA Downtown Campus, Duran Building – Lobby
8:30-9:45am	<b>Welcome &amp; NHERI Overview</b> <i>Presenter: JoAnn Browning Dean, College of Engineering, University of Texas at San Antonio</i>  <i>Following a welcome by the NCO-ECO lead, participants will learn about the NHERI network, receive an overview of the Summer Institute objectives, and share their goals for the event.</i>	La Villita Room	8:00-12:30pm	<b>NHERI Experimental Facilities &amp; Research Presentations</b> <i>Florida International University University of Washington Lehigh University The University of Texas-Austin Oregon State University University of California-Davis University of California-San Diego University of California-Berkeley University of Florida The University of Texas-Austin TACC</i>	La Villita Room	8:30am-10:00pm	<b>Broader Impacts Design</b> <i>Presenter: Karina I. Vielma Educational Specialist, University of Texas at San Antonio</i>  <i>Participants will learn about the broader impacts design of a grant proposal and will engage in creating a project that links the proposed research with a meaningful outreach initiative.</i>	La Villita Room
9:45-10:15am	<b>Coffee and Networking</b>	Riverwalk Room	12:30-1:30pm	<b>Networking Lunch</b>	Riverwalk Room	10:00-10:20pm	<b>Networking Break</b>	Riverwalk Room
10:15am-12:00pm	<b>NHERI Science Plan Discussion</b> <i>Presenter: Billy Edge Professor Emeritus, Texas A&amp;M University</i>  <i>Attendees will participate in an introduction, followed by a discussion of the NHERI Science Plan that addresses pressing research needs for the natural hazards community.</i>	La Villita Room	1:30-3:00pm	<b>Social Science Research and Overview of CONVERGE</b> <i>CONVERGE, University of Colorado – Boulder Presenters: Lori Peek – Director, Natural Hazards Center &amp; Professor, Department of Sociology, University of Colorado Boulder; Haorui Wu – Postdoctoral Research Associate, Natural Hazards Center, University of Colorado Boulder</i>	La Villita Room	10:20-12:00pm	<b>Proposal Working Meetings</b> <i>Attendees will collaboratively design a research proposal which incorporates NHERI experimental facility (EF), simulation center, cyber infrastructure, and RAPID resources as well as educational and social science components to engage the broader impacts of the proposed work.</i>	La Villita Room
12:00-1:00pm	<b>Welcome Luncheon</b>	Riverwalk Room	3:00-3:15pm	<b>Networking Break</b>	Riverwalk Room	12:00-12:45pm	<b>Networking Lunch</b>	Riverwalk Room
1:00-2:30pm	<b>Grant Writing Workshop – Research 101</b> <i>Presenter: Joy M. Pauschke Program Director, National Science Foundation</i>	La Villita Room	3:15-4:30pm	<b>Designing a NHERI Research Proposal</b> <i>Facilitators: JoAnn Browning &amp; Karina Vielma</i>  <i>Attendees will collaboratively design a research proposal which incorporates questions from the Science Plan as well as the use of NHERI experimental facility (EF), simulation center, cyber infrastructure, and RAPID resources. Representatives from NHERI sites will be available to answer specific questions about the use of the facilities and resources. This working meeting will help teams prepare their presentation for team research proposals.</i>	La Villita Room	12:45-2:00pm	<b>Proposal Presentations</b>	La Villita Room
2:30-3:00pm	<b>Coffee and Networking</b>	Riverwalk Room	4:30-5:00pm	<b>NHERI and CAREER Awardee Panel</b> <i>Successful awardees will answer questions about the strategies, communications, and planning that went into their proposal preparations.</i>	La Villita Room	2:00-2:30pm	<b>Awards and Reflection</b>	La Villita Room
3-4:30pm	<b>CAREER Award Workshop</b> <i>Presenter: Zhijian (ZJ) Pei Professor, Texas A&amp;M University</i>	La Villita	5:30-7:30pm	<b>NHERI User Forum Networking Event</b>	Mi Tierra Café & Bakery		<b>NHERI Leadership Meetings</b>	
4:30-5:00pm	<b>Reflections and Day 1 Evaluations</b>	La Villita Room				All Day	<i>User Form Meeting</i>	Alamo Boardroom
5:30pm	<b>San Antonio Excursion</b> <i>San Antonio Riverwalk – Go Rio Boat Tour</i>	Meet in Durang Building				1:30-4:30pm	<i>NIAC Meeting</i>	El Paseo A Room
						2:30-3:30pm	<i>Joint User Forum and NIAC Meeting</i>	Alamo Boardroom
						3:00-4:00pm	<i>ECO Committee Meeting</i>	El Paseo B Room

NHERI Summer Institute Day 1  
Wednesday, June 5, 2019



# Institute

Time	Description	Location
8:00-8:30am	<b>Breakfast</b>	Riverwalk Room
8:00-8:30am	<b>Registration</b> <i>Please sign in daily.</i>	UTSA Downtown Campus, Durang Building – Lobby
8:30-9:45am	<b>Welcome &amp; NHERI Overview</b> <i>Presenter: JoAnn Browning</i> <i>Dean, College of Engineering, University of Texas at San Antonio</i>	La Villita Room
	<i>Following a welcome by the NCO-ECO lead, participants will learn about the NHERI network, receive an overview of the Summer Institute objectives, and share their goals for the event.</i>	
9:45-10:15am	<b>Coffee and Networking</b>	Riverwalk Room
10:15am-12:00pm	<b>NHERI Science Plan Discussion</b> <i>Presenter: Billy Edge</i> <i>Professor Emeritus, Texas A&amp;M University</i>	La Villita Room
	<i>Attendees will participate in an introduction, followed by a discussion of the NHERI Science Plan that addresses pressing research needs for the natural hazards community.</i>	
12:00-1:00pm	<b>Welcome Luncheon</b>	Riverwalk Room
1:00-2:30pm	<b>Grant Writing Workshop – Research 101</b> <i>Presenter: Joy M. Pauschke</i> <i>Program Director, National Science Foundation</i>	La Villita Room
2:30-3:00pm	<b>Coffee and Networking</b>	Riverwalk Room
3-4:30pm	<b>CAREER Award Workshop</b> <i>Presenter: Zhijian (ZJ) Pei</i> <i>Professor, Texas A&amp;M University</i>	La Villita
4:30-5:00pm	<b>Reflections and Day 1 Evaluations</b>	La Villita Room
5:30pm	<b>San Antonio Excursion</b> <i>San Antonio Riverwalk – Go Rio Boat Tour</i>	Meet in Durang Building

NHERI Summer Institute Day 3 Friday, June 7, 2019				
Location	Time	Description	Location	
Riverwalk Room	8:00-8:30am	<b>Breakfast</b>	Riverwalk Room	
La Villita Room	8:00-8:30am	<b>Registration</b> <i>Please sign in daily.</i>	UTSA Downtown Campus, Durang Building – Lobby	
La Villita Room	8:30am-10:00pm	<b>Broader Impacts Design</b> <i>Presenter: Karina I. Vielma</i> <i>Educational Specialist, University of Texas at San Antonio</i>	La Villita Room	
		<i>Participants will learn about the broader impacts design of a grant proposal and will engage in creating a project that links the proposed research with a meaningful outreach initiative.</i>		
Riverwalk Room	10:00-10:20pm	<b>Networking Break</b>	Riverwalk Room	
La Villita Room	10:20-12:00pm	<b>Proposal Working Meetings</b> <i>Attendees will collaboratively design a research proposal which incorporates NHERI experimental facility (EF), simulation center, cyber infrastructure, and RAPID resources as well as educational and social science components to engage the broader impacts of the proposed work.</i>	La Villita Room	
Riverwalk Room	12:00-12:45pm	<b>Networking Lunch</b>	Riverwalk Room	
La Villita Room	12:45-2:00pm	<b>Proposal Presentations</b>	La Villita Room	
La Villita Room	2:00-2:30pm	<b>Awards and Reflection</b>	La Villita Room	
La Villita Room	All Day	<b>NHERI Leadership Meetings</b> <i>User Form Meeting</i>	Alamo Boardroom	
	1:30-4:30pm	<i>NIAC Meeting</i>	El Paseo A Room	
Mi Tierra Cafe & Bakery	2:30-3:30pm	<i>Joint User Forum and NIAC Meeting</i>	Alamo Boardroom	
	3:00-4:00pm	<i>ECO Committee Meeting</i>	El Paseo B Room	



# NHER

NHERI Summer Institute Day 1 Wednesday, June 5, 2019	
Time	Description
8:00-8:30am	<b>Breakfast</b>
8:00-8:30am	<b>Registration</b> <i>Please sign in daily.</i>
8:30-9:45am	<b>Welcome &amp; NHERI Overview</b> <i>Presenter: JoAnn Browning Dean, College of Engineering, University of Texas at Sa</i>  <i>Following a welcome by the NCO-ECO lead, participate about the NHERI network, receive an overview of the S objectives, and share their goals for the event.</i>
9:45-10:15am	<b>Coffee and Networking</b>
10:15am-12:00pm	<b>NHERI Science Plan Discussion</b> <i>Presenter: Billy Edge Professor Emeritus, Texas A&amp;M University</i>  <i>Attendees will participate in an introduction, followed by the NHERI Science Plan that addresses pressing resear natural hazards community.</i>
12:00-1:00pm	<b>Welcome Luncheon</b>
1:00-2:30pm	<b>Grant Writing Workshop – Research 101</b> <i>Presenter: Joy M. Pauschke Program Director, National Science Foundation</i>
2:30-3:00pm	<b>Coffee and Networking</b>
3-4:30pm	<b>CAREER Award Workshop</b> <i>Presenter: Zhijian (ZJ) Pei Professor, Texas A&amp;M University</i>
4:30-5:00pm	<b>Reflections and Day 1 Evaluations</b>
5:30pm	<b>San Antonio Excursion</b> <i>San Antonio Riverwalk – Go Rio Boat Tour</i>

NHERI Summer Institute Day 2 Thursday, June 6, 2019		
Time	Description	Location
7:30-8:00am	<b>Breakfast</b>	Riverwalk Room
7:45-8:00am	<b>Registration</b>	
8:00-12:30pm	<b>NHERI Experimental Facilities &amp; Research Presentations</b> <i>Florida International University University of Washington Lehigh University The University of Texas-Austin Oregon State University University of California-Davis University of California-San Diego University of California-Berkeley University of Florida The University of Texas-Austin TACC</i>	La Villita Room
12:30-1:30pm	<b>Networking Lunch</b>	Riverwalk Room
1:30-3:00pm	<b>Social Science Research and Overview of CONVERGE</b> <i>CONVERGE, University of Colorado – Boulder</i> <i>Presenters: Lori Peek – Director, Natural Hazards Center &amp; Professor, Department of Sociology, University of Colorado Boulder; Haorui Wu – Postdoctoral Research Associate, Natural Hazards Center, University of Colorado Boulder</i>	La Villita Room
3:00-3:15pm	<b>Networking Break</b>	Riverwalk Room
3:15-4:30pm	<b>Designing a NHERI Research Proposal</b> <i>Facilitators: JoAnn Browning &amp; Karina Vielma</i>  <i>Attendees will collaboratively design a research proposal which incorporates questions from the Science Plan as well as the use of NHERI experimental facility (EF), simulation center, cyber infrastructure, and RAPID resources. Representatives from NHERI sites will be available to answer specific questions about the use of the facilities and resources. This working meeting will help teams prepare their presentation for team research proposals.</i>	La Villita Room
4:30-5:00pm	<b>NHERI and CAREER Awardee Panel</b> <i>Successful awardees will answer questions about the strategies, communications, and planning that went into their proposal preparations.</i>	La Villita Room
5:30-7:30pm	<b>NHERI User Forum Networking Event</b>	Mi Tierra Café & Bakery

NHERI Summer Institute Day 3 Friday, June 7, 2019	
Time	Location
8:00-8:30am	Riverwalk Room
8:00-8:30am	UTSA Downtow Campus, Durang Building – Lobby
8:30-9:45am	La Villita Room
9:45-10:15am	Riverwalk Room
10:15am-12:00pm	La Villita Room
12:00-1:00pm	Riverwalk Room
1:00-2:30pm	La Villita Room
2:30-3:00pm	La Villita Room
3-4:30pm	Alamo Boardro
4:30-5:00pm	El Paseo A Room
5:30pm	Alamo Boardro
	El Paseo B Room



# NHERI Summer

NHERI Summer Institute Day 1 Wednesday, June 5, 2019			NHERI Summer Institute Day 2 Thursday, June 6, 2019		
Time	Description	Location	Time	Description	Location
8:00-8:30am	<b>Breakfast</b>	Riverwalk Room	7:30-8:00am	<b>Breakfast</b>	Riverwalk Room
8:00-8:30am	<b>Registration</b> <i>Please sign in daily.</i>	UTSA Downtown Campus, Duran Building – Lobby	7:45-8:00am	<b>Registration</b>	UTSA Downtown Campus, Duran Building – Lobby
8:30-9:45am	<b>Welcome &amp; NHERI Overview</b> <i>Presenter: JoAnn Browning, Dean, College of Engineering, University of Texas at San Antonio</i>  <i>Following a welcome by the NCO-ECO lead, participants will learn about the NHERI network, receive an overview of the Summer Institute objectives, and share their goals for the event.</i>	La Villita Room	8:00-12:30pm	<b>NHERI Experimental Facility</b> <i>Florida International University, Washington State University, Lehigh University, The University of Texas, Oregon State University, University of California, University of California, University of California, University of Florida, The University of Texas</i>	La Villita Room
9:45-10:15am	<b>Coffee and Networking</b>	Riverwalk Room	12:30-1:30pm	<b>Networking Lunch</b>	Riverwalk Room
10:15am-12:00pm	<b>NHERI Science Plan Discussion</b> <i>Presenter: Billy Edge, Professor Emeritus, Texas A&amp;M University</i>  <i>Attendees will participate in an introduction, followed by a discussion of the NHERI Science Plan that addresses pressing research needs for the natural hazards community.</i>	La Villita Room	1:30-3:00pm	<b>Social Science Research CONVERGE, University</b> <i>Presenters: Lori Peek – I Professor, Department of Haorui Wu – Postdoctoral Center, University of Colorado</i>	La Villita Room
12:00-1:00pm	<b>Welcome Luncheon</b>	Riverwalk Room	3:00-3:15pm	<b>Networking Break</b>	Riverwalk Room
1:00-2:30pm	<b>Grant Writing Workshop – Research 101</b> <i>Presenter: Joy M. Pauschke, Program Director, National Science Foundation</i>	La Villita Room	3:15-4:30pm	<b>Designing a NHERI Resource</b> <i>Facilitators: JoAnn Browning, University of Texas at San Antonio</i>  <i>Attendees will collaborate and incorporate questions from NHERI experimental facility infrastructure, and RAPID sites will be available to discuss their presentation for tea.</i>	La Villita Room
2:30-3:00pm	<b>Coffee and Networking</b>	Riverwalk Room	4:30-5:00pm	<b>NHERI and CAREER / Successful awardees will</b> <i>communications, and planning preparations.</i>	La Villita Room
3-4:30pm	<b>CAREER Award Workshop</b> <i>Presenter: Zhijian (ZJ) Pei, Professor, Texas A&amp;M University</i>	La Villita Room	5:30-7:30pm	<b>NHERI User Forum News</b>	La Villita Room
4:30-5:00pm	<b>Reflections and Day 1 Evaluations</b>	La Villita Room			
5:30pm	<b>San Antonio Excursion</b> <i>San Antonio Riverwalk – Go Rio Boat Tour</i>	Meet in Durang Building			

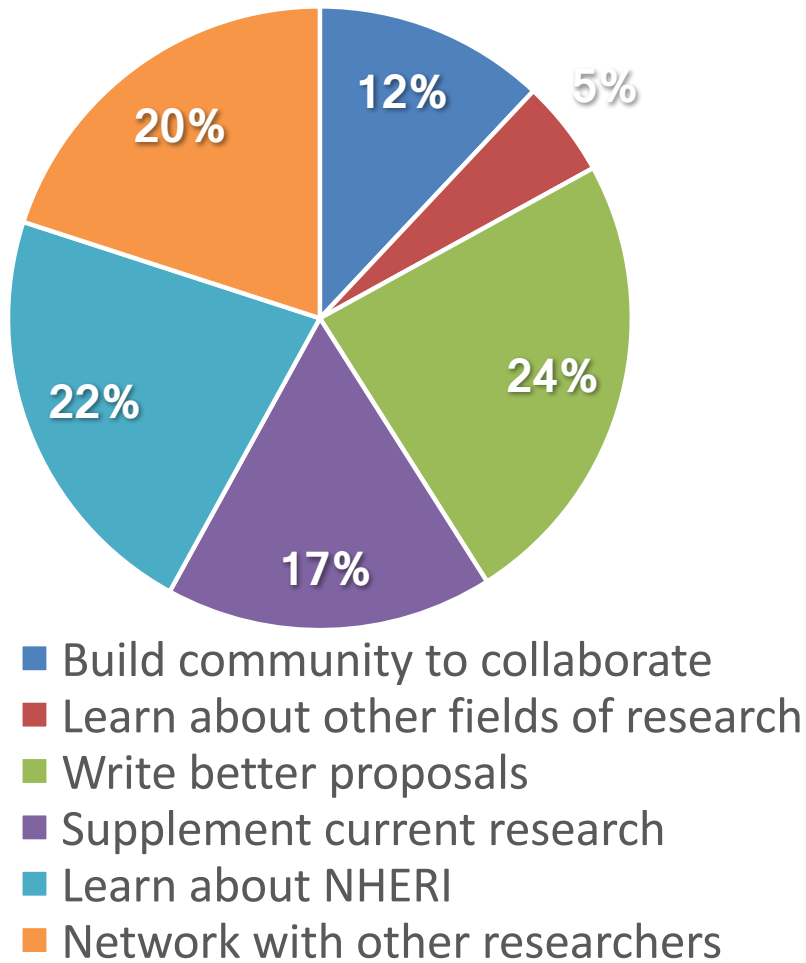
NHERI Summer Institute Day 3 Friday, June 7, 2019		
Time	Description	Location
8:00-8:30am	<b>Breakfast</b>	Riverwalk Room
8:00-8:30am	<b>Registration</b> <i>Please sign in daily.</i>	UTSA Downtown Campus, Durang Building – Lobby
8:30am-10:00pm	<b>Broader Impacts Design</b> <i>Presenter: Karina I. Vielma, Educational Specialist, University of Texas at San Antonio</i>  <i>Participants will learn about the broader impacts design of a grant proposal and will engage in creating a project that links the proposed research with a meaningful outreach initiative.</i>	La Villita Room
10:00-10:20pm	<b>Networking Break</b>	Riverwalk Room
10:20-12:00pm	<b>Proposal Working Meetings</b> <i>Attendees will collaboratively design a research proposal which incorporates NHERI experimental facility (EF), simulation center, cyber infrastructure, and RAPID resources as well as educational and social science components to engage the broader impacts of the proposed work.</i>	La Villita Room
12:00-12:45pm	<b>Networking Lunch</b>	Riverwalk Room
12:45-2:00pm	<b>Proposal Presentations</b>	La Villita Room
2:00-2:30pm	<b>Awards and Reflection</b>	La Villita Room
	<b>NHERI Leadership Meetings</b>	
All Day	<i>User Form Meeting</i>	Alamo Boardroom
1:30-4:30pm	<i>NIAC Meeting</i>	El Paseo A Room
2:30-3:30pm	<i>Joint User Forum and NIAC Meeting</i>	Alamo Boardroom
3:00-4:00pm	<i>ECO Committee Meeting</i>	El Paseo B Room





# NHERI Summer Institute - Assessments

Participant Initial Goals



## What goals did you accomplish at the NHERI Summer Institute?

*Met people who could be potential collaborators, learned more about the facilities and the projects that go on there, improved knowledge of proposal writing.*

*I learned a considerable deal about the multiple NHERI sites that I did not know before...*

*The hands-on grant concept and educational curriculum activities really challenged me to think, work in an interdisciplinary team, and present ideas...It modeled a teaching approach that could even be effective in my classroom.*



# Communications

## NEWS ROOM

Feature Stories + News Releases



93 articles

## “Announce” Internal Newsletter

- [Registration open: SimCenter Training in Natural Hazards Engineering, June 13-14](#) *announce at designsafe-ci.org*
- [DEADLINE EXTENDED: Joint U of Florida & U of Washington NHERI workshop, May 23-24](#) *announce at designsafe-ci.org*
- [SimCenter Programming Bootcamp, July 22 - 26, 2019](#) *announce at designsafe-ci.org*
- [REMINDER: Wall of Wind EF User Workshop, June 14](#) *announce at designsafe-ci.org*
  - [REMINDER: Wall of Wind EF User Workshop, June 14](#) *announce at designsafe-ci.org*
- [QuakeCoRE/NCREE Blind Prediction Competition](#) *announce at designsafe-ci.org*
- [NHERI Monthly Recap, May 2019](#) *announce at designsafe-ci.org*
- [REMINDER: SimCenter Bootcamp travel assistance deadline is May 24](#) *announce at designsafe-ci.org*
- [NHERI Annual User Satisfaction Survey](#) *announce at designsafe-ci.org*

1994 subscribers

DesignSafe Slack Channel



NHERI Quarterly and Monthly Recap Newsletters

1278 subscribers





# Communications

## NEWS ROOM

Feature Stories + News Releases



93 articles

## “Announce” Internal Newsletter

- [Registration open: SimCenter Training in Natural Hazards Engineering, June 13-14](#) *announce at designsafe-ci.org*
- [DEADLINE EXTENDED: Joint U of Florida & U of Washington NHERI workshop, May 23-24](#) *announce at designsafe-ci.org*
- [SimCenter Programming Bootcamp, July 22 - 26, 2019](#) *announce at designsafe-ci.org*
- [REMINDER: Wall of Wind EF User Workshop, June 14](#) *announce at designsafe-ci.org*
  - [REMINDER: Wall of Wind EF User Workshop, June 14](#) *announce at designsafe-ci.org*
- [QuakeCoRE/NCREE Blind Prediction Competition](#) *announce at designsafe-ci.org*
- [NHERI Monthly Recap, May 2019](#) *announce at designsafe-ci.org*
- [REMINDER: SimCenter Bootcamp travel assistance deadline is May 24](#) *announce at designsafe-ci.org*
- [NHERI Annual User Satisfaction Survey](#) *announce at designsafe-ci.org*

1994 subscribers

DesignSafe Slack Channel



1278 subscribers



NHERI Quarterly and Monthly Recap Newsletters

## LINKS to RESOURCES

NHERI Logos and Event Calendar Templates





# Communications

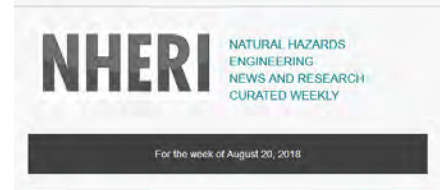
## NEWS ROOM

### Feature Stories + News Releases



93 articles

### Natural Hazards Weekly Newsletter



66 issues  
200+ subscribers  
Up 238%

### DesignSafe Radio Podcasts



54 episodes  
2,299+ downloads

### “Announce” Internal Newsletter

- [Registration open: SimCenter Training in Natural Hazards Engineering, June 13-14](#) *announce at designsafe-ci.org*
- [DEADLINE EXTENDED: Joint U of Florida & U of Washington NHERI workshop, May 23-24](#) *announce at designsafe-ci.org*
- [SimCenter Programming Bootcamp, July 22 - 26, 2019](#) *announce at designsafe-ci.org*
- [REMINDER: Wall of Wind EF User Workshop, June 14](#) *announce at designsafe-ci.org*
- [REMINDER: Wall of Wind EF User Workshop, June 14](#) *announce at designsafe-ci.org*
- [QuakeCoRE/NCREE Blind Prediction Competition](#) *announce at designsafe-ci.org*
- [NHERI Monthly Recap, May 2019](#) *announce at designsafe-ci.org*
- [REMINDER: SimCenter Bootcamp travel assistance deadline is May 24](#) *announce at designsafe-ci.org*
- [NHERI Annual User Satisfaction Survey](#) *announce at designsafe-ci.org*

1994 subscribers

### DesignSafe Slack Channel



1278 subscribers



NHERI Quarterly and Monthly Recap Newsletters

## LINKS to RESOURCES

### NHERI Logos and Event Calendar







# Communications & Social Media

## EXTERNAL

## COMMUNICATIONS

---

Master E-mail list:

**470 subscribers**

Publications referencing

**NHERI: 118 Total**

(68 journal publications; 33 conference publications; 17 other publications)





# Communications & Social Media

## EXTERNAL COMMUNICATIONS

Master E-mail list:  
**470 subscribers**

Publications referencing  
NHERI: **118 Total**

(68 journal publications; 33 conference publications; 17 other publications)



Social Media  
**1000+ posts**

Facebook  
**530 followers**

Twitter  
**412 followers**  
**Up 146%**

Natural Hazards Engineering Research Infrastructure  
Published by Coe Al Ulita · June 26 at 1:15 PM ·

NHERI REU students Salwa Badr, Jack Gaiher and Nilo Espinoza collaboratively solving a linear algebra equation given by their mentor, Dr. Clint Dawson, and transforming of ideas to properly code the problem using Python in DesignSafe's Jupyter notebook. Thanks to The University of Texas at Austin and National Science Foundation (NSF) (Photo: Nilo Espinoza)

**5000 people reached**

Get More Likes, Comments and Shares  
Boost this post for \$20 to reach up to 15,000 people.

669 people reached

Dave Semeraro, Leandra Claywood and 18 others · 7 Shares

TWEET HIGHLIGHTS

Top Tweet earned 2,138 impressions

#naturalhazards #engineers: we want your help planning research in earthquake and storm damage mitigation. Explore the NHERI Science Plan and add your ideas about the future of the profession HERE: [ow.ly/eZZ30kFbXm](https://ow.ly/eZZ30kFbXm) @NSF\_ENG [pic.twitter.com/pGxdrUuFlv](https://pic.twitter.com/pGxdrUuFlv)

NATURAL HAZARDS ENGINEERING RESEARCH INFRASTRUCTURE  
**FIVE-YEAR SCIENCE PLAN**  
MULTI-HAZARD RESEARCH TO MAKE A MORE RESILIENT WORLD

**675 tweets**  
**5,500+ impressions/month!**  
**Up 157%**



# Multi-Site Social Media Presence

## GOALS:

- Establish a social media presence for all 10 facilities
- Encourage active participation on social media platforms



# Multi-Site Social Media Presence

## GOALS:

- Establish a social media presence for all 10 facilities
- Encourage active participation on social media platforms

## SUCSESSES:

- Create formal social media guidelines
  - Created NSF NHERI branded social media accounts
  - Require posting once a week to be considered “active”
- Share social media successes via news items and newsletters
- Emphasize that social media engagement is a **high priority for NSF**
  - **@NSF, @NSF\_ENG, #NSFfunded**
- Encourage a web to social media model





# Multi-Site Social Media Presence

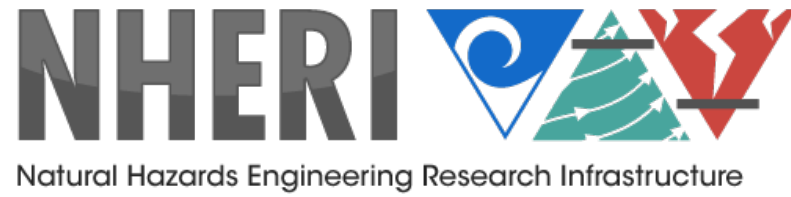
Facility	Facebook	Twitter	Other
UT Austin	<a href="#">@NHERIatUTMobileShakers</a>	<a href="#">@UTMobileShakers</a>	
UC San Diego	<a href="#">@UCSD.NHERI</a>	<a href="#">@NHERI_UCSD</a>	
UC Davis			<a href="#">CGM Facebook Group</a>
Lehigh University	<a href="#">@NHERILehighRTMD</a>	<a href="#">@NHERILehighRTMD</a>	
University of Florida			<a href="#">#ufNHERI</a>
Florida International University			
Oregon State University		<a href="#">@NheriOsu</a>	
NHERI SimCenter	<a href="#">@NHE.SimCenter</a>	<a href="#">@NHE_SimCenter</a>	
RAPID	<a href="#">@RAPIDNaturalHazardsRecon</a>	<a href="#">@NHERI_RAPID</a>	
NHERI NCO	<a href="#">@NaturalHazardsEngineeringResearchInfrastructure</a>	<a href="#">@NHERI_NCO</a>	
CONVERGE		<a href="#">@NHERI_CONVERGE</a>	



# NCO Key Activities in YEAR 4

- **Lead a vibrant multi- hazard community of users**
  - Lead and coordinate the activities of the governance groups of NHERI
  - Workshop with TTC and NHERI Researchers to further refine the evaluation of projects to support efforts to expedite transfer from research to practice
  - Coordinate and support newest NHERI Facility: “CONVERGE”, PI: Prof. Lori Peek from UC Boulder
  - Strengthen International Partnerships
  - NHERI beyond 2021
- **Enable world-class research**
  - Identify and implement network wide metrics to show value of NHERI to users
  - Provide oversight and coordination to the scheduling of existing and new users of the NHERI experimental facilities
    - Schedule of RAPID Facility as of September, 2018
    - Complete site visits
    - Share lessons learned and complete tactical planning cycle
- **Lead and organize educational and community outreach activities**
  - Lead and coordinate the REU program
  - Organize the Summer Institute
  - Broadly disseminate the Impact of NHERI
  - Develop NHERI Impact Publication





**THE NHERI NETWORK IS SUPPORTED BY MULTIPLE GRANTS FROM THE NATIONAL SCIENCE FOUNDATION.**





---

# NCO Education and Community Outreach Report

June 21, 2019

# ECO Committee

- Met after Summer Institute, June 7<sup>th</sup> at 3pm
- Priority discussions
  - Next Summer Institute date & details
    - Difficult to find the best summer date for Quarter System
    - Possibly: Previous awardees present research and how they obtained use of facility(ies)
    - More to come!
  - Critical participant reflections
    - 1 person mentioned it was difficult to work with such diverse teams, and that social science should not be required.
      - Collaborative teams: goal of the Summer Institute! This is the opportunity to get out of comfort zone in safe environment
    - Liked suggestion to Learn and do=hear from a presenter and practice preparing that section of the proposal just learned. A little more structured



- *I appreciated a lot the CAREER award, the NSF, and the Broad Impact presentations because they gave me a lot of good **information and tips**, which I was not aware before attending the Summer Institute. I liked the **hands-on experience** of the Broad Impact presentation because it helped me to understand the meaning of broad impact.*

# Summer Institute Report

- *The summer institute has been a great experience. I feel the NHERI has **connected** us as a research community in natural hazard engineering. It provides many valuable **networking opportunities** for junior researchers to get connected and learn from many experts in the field.*



- *Previous I had little idea about **social scientist**. I didn't know what kind of research they were doing and how they could relate to civil engineering. But after this institute, I did learn a lot on this topic, especially how they can **benefit our research**.*



# REU Report

- REU 1 began May 28<sup>th</sup>; REU 2 began June 17<sup>th</sup>
- Students and mentors meeting individually with Karina
- REU attending Natural Hazards Workshop & Researchers Meeting July 16-18, 2019
  - 16 students presenting research posters on July 17<sup>th</sup>
  - Students will attend NHERI session & Bar-B-Q







**THE NHERI NETWORK IS SUPPORTED BY MULTIPLE GRANTS FROM THE NATIONAL SCIENCE FOUNDATION.**



**Schedule of 30-minute Individual Meetings – Summer Institute, San Antonio, TX  
NHERI Network Independent Advisory Committee and Facilities**

**Paseo A Room**

<b>Facility</b>	<b>Representative</b>	<b>Date</b>	<b>Time</b>
UC San Diego- Large Outdoor Shake Table	Ozgur Ozcelik	June 6	1:00 to 1:30 PM
University of Texas, Austin- Mobile Lab	Tricia Clayton	June 6	1:30 to 2:00 PM
University of Washington- RAPID and UC Berkeley- SimCenter	Laura Lowes	June 6	2:00 to 3:00 PM
Florida International University- Wind Simulation	Arindam Chowdhury	June 6	3:00 to 3:30 PM
Lehigh University- Hybrid Simulation	Liang Cao	June 6	3:30 to 4:00 PM
University of Florida- Wind Simulation	Forrest Masters	June 6	4:00 to 4:30 PM
University of Texas, Austin- DesignSafe-CI	Tim Cockerill	June 7	10:00 to 10:30 AM
University of Colorado, Boulder- CONVERGE	Lori Peek	June 7	10:30 to 11:00 AM
UC Davis- Geotech Centrifuges	Ross Boulanger (Remote Participation)	June 7	11:00 to 11:30 AM
Oregon State University- Wave Basin and Flume	Pedro Lomonaco	June 7	11:30 AM to Noon

**Membership NIAC Year 3**

Lesley Ewing (Coastal Engineering, Social Sciences and Policy, California Coastal Commission)  
 William Hansmire (Geotechnical Engineering, Parsons Brinckerhoff Inc.)- Vice Chair  
 Farzad Naeim (Earthquake Engineering, University of California, Irvine)  
 Catherine Petroff (Coastal Engineering, US Army Corps)  
 John van de Lindt (Wood Earthquake Engineering, Colorado State University)- Chair  
 Peter Vickery (Wind Engineering, Applied Research Associates)  
 Richard Woods (Geotechnical Engineering, University of Michigan)