

**NHERI Council Monthly Meeting No. 3 in Y-4**  
**5 September 2019, 2:00 – 3:00 PM EDT**

**NHERI Council Fall 2019 Meetings**

Sep 5, 2019 02:00 PM

Oct 3, 2019 02:00 PM

Nov 7, 2019 02:00 PM

Dec 5, 2019 02:00 PM

**Zoom Meeting Details:**

Join Zoom Meeting: <https://DesignSafe-ci.zoom.us/j/789554634>

One tap mobile

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Dial by your location

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Meeting ID: 789 554 634

Find your local number: <https://zoom.us/u/abv90zrfOo>

**Attending:**

- Florida International University: Jason Gkountis Site Operations Manager WOW
- Lehigh University: Jim Ricles (EF Dir.), ATLSS
- Oregon State University: Dan Cox (EF Dir.) Hinsdale
- Purdue University: Julio Ramirez (Dir., Council Secretary) and Dan Zehner (Sch./Op. Coord.), NCO
- University of California, Berkeley: Greg Deierlein (Co-Dir.) and Matt Schoettler (Assoc. Dir. – Ops), SimCenter
- University of California, Davis: Dan Wilson (Assoc. Dir.), CGM
- University of California, San Diego: Tara Hutchinson, LHPOST
- University of Colorado Boulder:
- University of Florida: Kurt Gurley, Powell Lab
- University of Texas at Austin (DesignSafe-CI):
- University of Texas at Austin: Ken Stokoe (EF Dir.), Mobile Lab
- University of Washington: Joe Wartman (EF Dir.), RAPID
- National Science Foundation: Joy Paushke (Prog. Dir, NHERI)

**Minutes**

1. Attendance, Review and Approval of Minutes (previously distributed by e-mail) for Meeting No. 2 (8/1, 2019) in Y-4 (Masters) –  
Minutes were approved with one friendly amendment. Ken Stokoe was added to the list of attendees in representation of the University of Texas, Mobile Lab. Joe Wartman moved and Tara Hutchinson seconded.  
  
Approved Minutes are posted at: <https://www.designsafe-ci.org/facilities/nco/governance/nheri-council/>
2. Continuing Business
  - a. NCO- (Julio Ramirez)
    - i. NHERI Special Collection in Frontiers in Built Environment- Update (Julio Ramirez)  
Julio indicated that the editorial review board had been formed, asked for any additional comments on the editorial, and reminded the Council members to submit the abstract of the paper by next week. Since there were no additional comments on the editorial, it will be sent to the publisher.

**Action Item:** Submit abstract (up to 350 words- free format) by September 15. The abstract of the NCO paper is attached to these minutes as a possible example. Please identify corresponding author in each abstract.

ii. Science Plan- Update and request (Julio and Lori)

The working group is preparing the first draft of V2 of the Science Plan for review by the Council, and Science Plan full Task Group. The Council was invited to update the facility material in the Appendix, and provide new photos. New contributions from CONVERGE and the NCO will be added to the Appendix as well. Finally, the Working Group asked for Council contributions in the form of call out box material (Ask distributed by e-mail during the meeting, and attached to these minutes contains examples of possible call out boxes). The deadline for call out box material is September 15.

**Action Item:** Please provide your call out boxes by September 15.

iii. NHERI-Wide Metrics Update (Dan Zehner)

Dan informed the Council that individual meetings with each facility to discuss common metrics had been completed. Council provided additional feedback during the discussion. One recommendation was that after the NHERI-wide Operational Metrics such as Projects, Users, and Utilization had been established to consider extending the work to identify metrics that best show the value of NHERI to society.

iv. NHERI Booth Plans for Year 4: identify conferences/meetings- Ongoing

b. CONVERGE (Lori Peek)

Lori Peek submitted the following material for the minutes in her absence:

-Leadership Corps is continuing to work together to bring together the NSF-supported "EERs" (Extreme Events Research/Reconnaissance networks) and the associated NHERI components (NCO, CONVERGE, RAPID, DesignSafe).

-NSF has recently funded two new EER's: NEER (nearshore) and OSEEER (operations and systems engineering) have now joined GEER (geotechnical), SSEER (social science), StEER, and ISEEER (interdisciplinary science and engineering). See: <https://converge.colorado.edu/research-networks>

-DesignSafe + CONVERGE collaboration continues on the social science/interdisciplinary data model that will be under the broader Field Research data model that DesignSafe has recently released!

-CONVERGE Training Module on Social Vulnerability and Disasters is live! We hope you might use it in your classes to get your students thinking about potentially vulnerable populations in various place. We will do a demo webinar on October 4, 12:30 p.m.-1:00 p.m. Eastern. The module is here: <https://converge.colorado.edu/training-modules>

c. Facility Highlights

i. FIU (Arindam Chowdhury/Ioannis Sizas)

1. Bringing new equipment/capabilities – Plan to add a state-of-the-art PIV system early next year.
2. Upcoming tests that can be watched live (Week of September 16, 2019)– Aeroelastic model of transmission system (Ohio State U. project) will be tested under wind and telepresence will be used so tests can be watched live.

3. New Business

a. NSF Items (Joy Pauschke)

- Guidelines for the renewal proposal available later this month.
- Encourage Council to consider a NHERI Researchers Meeting in 2020.
- Prepare Highlight material for NHERI Impact Publication along the lines of the NEES Impact publication.

**Action Item:** Julio to prepare template and after comments from NSF, distribute to the NHERI Council for review.

b. NHERI-wide meeting with researchers – similar to the NEES Annual Meetings perhaps concurrent with another national meeting, such as Natural Hazards Center meeting.

Tabled until next meeting.

4. Next Meeting- **October 3, 2019; 2:00-3:00 PM (EST)**

5. Adjourn

Meeting adjourned at 3:02 PM. Tara moved and Greg seconded the motion.

# The Network Coordination Office of NHERI (Natural Hazards Engineering Research Infrastructure)

*Cheryl Ann Blain<sup>(1)</sup>, Antonio Bobet<sup>(2)</sup>, JoAnn Browning<sup>(3)</sup>, Billy Edge<sup>(4)</sup>, Bill Holmes<sup>(5)</sup>, David Johnson<sup>(6)</sup>, Marti LaChance<sup>(7)</sup>, \*Julio Ramirez<sup>(8)</sup>, Ian Robertson<sup>(9)</sup>, Tom Smith<sup>(10)</sup>, Chris Thompson<sup>(11)</sup>, Karina Vielma-Cumpian<sup>(12)</sup>, Dan Zehner<sup>(13)</sup>, Delong Zuo<sup>(14)</sup>*

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## Abstract

NHERI, or the Natural Hazards Engineering Research Infrastructure, is supported by the National Science Foundation (NSF) as a distributed, multi-user national facility that provides the natural hazards research community with access to a powerful research infrastructure. NHERI is comprised of separate research infrastructure awards for a Network Coordination Office (NCO), Cyberinfrastructure, a Computational Modeling and Simulation Center, eight Experimental Facilities, and CONVERGE.

Awards made for NHERI contribute to NSF's role in the National Earthquake Hazards Reduction Program and the National Windstorm Impact Reduction Program of the United States. The mission of NHERI is to provide the earthquake, wind, coastal engineering and social sciences communities with access to research infrastructure, education and community outreach activities focused on improving the resilience and sustainability of the civil infrastructure against earthquakes, windstorms and associated natural events such as tsunami and storm surge in coastal areas.

In this paper, the role and key NHERI activities are described for the NCO, which is led by Purdue University, along with partner institutions the University of Texas at San Antonio, North Carolina State University, Texas Tech University, the U.S. Naval Research Laboratory, and the University of Hawaii at Manoa. The NHERI-NCO serves as a focal point and leader of a multi-hazards research community, and maintains a community-based NHERI science plan. It manages scheduling of our partner NHERI Experimental Facilities and coordinates all components to ensure effective and fair governance, efficient testing and user support within a safe environment. Another important role of the NCO is to lead the NHERI-wide educational and outreach activities. The NCO works to develop strategic national and international partnerships and to coordinate NHERI activities with the other awardee components to form a cohesive and fully integrated global natural hazards engineering research infrastructure that fosters collaboration in new ways.

Subject: Request for Call Out Box for NHERI Science Plan

Dear Colleagues,

We are requesting your help on a key task related to Version 2 of the NHERI Science Plan. Please read this message, and if you would like to have your facility / component highlighted, please send me a callout box – using the model described below, by **September 15, 2019**.

The NHERI working group assembling Version 2 of the Plan (for later review by the larger Science Plan Task Group and the Council) is eager to illustrate the impact of the ongoing work in NHERI while highlighting key themes that make NHERI stand out as unique. We are looking for short, visually appealing call out boxes that focus on, for example, the importance of NHERI in terms of:

- the power of shared–use facilities
- how your facility or component encourages multi- and interdisciplinary research collaboration
- how you are training and mentoring a diverse next generation of researchers
- how you are using or integrating disruptive technologies
- how your research facility has contributed to advances in engineering, science, policy, or practice
- how open access to data and high-performance computing resources are advancing the state of knowledge
- the grand challenges you are addressing to improve the resilience of communities against natural hazards

We have prepared three such cases that the working group envisions interspersed throughout the plan text to draw attention to the community contributions towards the goal of NHERI. Note that the general **theme** is emphasized at the top in bold, and the NHERI facility is named. We also recommend a picture, and a short 3-5 sentence call out box that underscores the key theme. (Joe – Please note we just made up the numbers for the RAPID box! Similarly, Arindam, the case for the WoW is meant to be an example to get readers thinking about the shared use theme and how we might tell the story! We make no claims to accuracy at this stage—just an example!)

We are excited to learn from you and to showcase the work of your facilities. We hope you may choose to write up one or more of these call out boxes. Even if we cannot use all of them in the Science Plan, these may make for great news stories or call out boxes via DesignSafe as well.

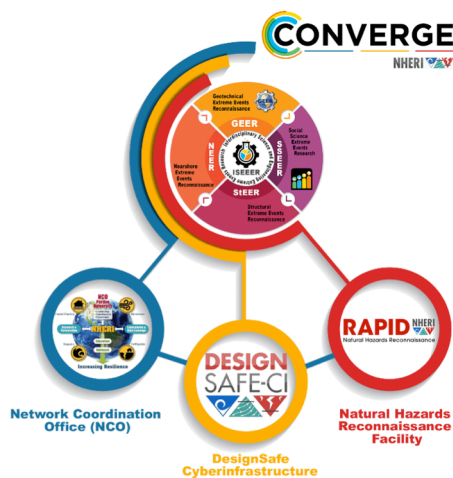
Thank you in advance for your time.

## **Training a Diverse Next Generation of Reconnaissance Researchers - NHERI RAPID**



The NHERI RAPID facility is dedicated to advancing natural hazards reconnaissance through the shared use of equipment, tools, and technologies. Since its founding in 2017, RAPID has conducted 13 training sessions for over 72 researchers from diverse disciplinary, geographic, and cultural backgrounds.

## Coordinating Rapid Reconnaissance Researchers – NHERI CONVERGE



How will the research community respond effectively in the event of a major disaster? NHERI CONVERGE is home to the first-ever disaster reconnaissance Leadership Corps—which includes the leaders of the NSF-funded Extreme Events Research / Reconnaissance networks and the NHERI components that support them. The Leadership Corps is working together to ensure that geotechnical, social science, structural engineering, nearshore, operations and systems engineering, and interdisciplinary research communities are effectively coordinating, communicating, and collaborating as they do scientifically rigorous and ethically grounded work.

## Shared Use for a Safer Nation – NHERI Wall of Wind



The Wall of Wind at Florida International University is the nation's largest wind testing facility. Under the NHERI umbrella, it is now open to researchers across the nation. Why does this matter? In 2018, Elaina Sutley, an assistant professor of civil engineering at the University of Kansas was able to use the facility to test the performance of mobile home structures in major wind events. This work would not have been possible at her home University, but now she is able to collaborate through NHERI to help advance community resilience through advancing new mitigation techniques for vulnerable structures.