**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](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](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
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

PURDUE UNIVERSITY
Network Coordination Office
NSF Award #1612144

UC BERKELEY
Computational Simulation
NSF Award #1612843

UNIVERSITY OF COLORADO BOULDER
Extreme Event Reconnaissance Coordination
NSF Award #1841338

UNIVERSITY OF WASHINGTON
Natural Hazards Reconnaissance Equipment
NSF Award # 1611820

OREGON STATE UNIVERSITY
Wave Basin and Flume
NSF Award # 1519679

UNIVERSITY OF TEXAS, AUSTIN
Mobile Field Shakers
NSF Award #1520808

FLORIDA INTERNATIONAL UNIVERSITY
Wind Simulation
NSF Award #1520853

UNIVERSITY OF TEXAS, AUSTIN
Community Cyberinfrastructure
NSF Award #1520817

UNIVERSITY OF FLORIDA
Wind Simulation
NSF Award #1520843

UC DAVIS
Geotechnical Centrifuges
NSF Award #1520581

UC SAN DIEGO
Large Outdoor Shake Table
NSF Award #1520904

LEHIGH UNIVERSITY
Hybrid Simulation
NSF Award #1520765
NCO Governance and Operations

Executive Vice President for Research and Partnership
Purdue University

Sponsored Program Services
Purdue University

Discovery Park
Purdue University

NIAC
To provide independent guidance & advice to the council

NHERI Council
To provide collective & coordinated leadership

User Forum
To provide the council with community advice

Strategic Committee
Julio Ramirez (Chair)
Cheryl Ann Blain
Antonio Bobet
JoAnn Browning
Billy Edge
William Holmes
David Johnson
Ian Robertson
Thomas L. Smith
Delong Zuo

Director
Julio Ramirez

Schedule & Operations Coordinator
Dan Zehner
Facility Scheduler & Operations Coordinator
Purdue University
(12 months)

Technology & Media Specialist
Chris Thompson
Software Engineer
Purdue Rosen Center
(6 months)

Central Scheduling Committee
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

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

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

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)

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
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

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

Leadership Role and Expertise
- Education Specialist with ECO

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

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.
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, 13th 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
- 2nd 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

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

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

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

**RAPID facility usage is from 9/1/18-4/19/19
Research Experiences for Undergraduates (REU)

Melody Trejo
- Home university: California State University, Fullerton
- NHERI EF site: Lehigh University, OITSS Engineering Laboratory
- Faculty mentor: Dr. Spencer Quinl
- Graduate student mentor: Safwan Al-Subahawi
- Research project title: Resilience 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: A dynamic experimental study on a full-scale model of a wind turbine
- Research paper: Paper-Caleb Wegener.docx
REU Student Photo Contest
NHERI REU – Participants’ Attributes

- **Applicants vs. Participants**
  - Applicants: 
    - Round 1: 16% of Applicants
    - Round 2: 21% of Applicants
    - Round 3: 19% of Applicants
  - Participants: 
    - Round 1: 5% of Participants
    - Round 2: 16% of Participants
    - Round 3: 19% of Participants

- **Race Distribution**
  - Hispanic: 34%
  - Black: 61%
  - Asian: 5%
  - Multiple Races: 5%
  - White: 19%
  - n/a: 3%

- **First Generation Status**
  - 1st Generation: 8%
  - Not 1st Generation: 31%
  - Not available: 61%

- **Gender Distribution**
  - Female: 56%
  - Male: 42%
  - Other: 3%

- **Number of Participants**: N=77
NHERI Summer Institute

Early Career Development

Proposals & Reflection

Community Building

NHERI crowd Teams
Linked & Networked

Contribute & Learn

NHERI Science Plan & Assets
NHERI SI – Participants’ Attributes

- **Race/ethnicity**
  - White: 41%
  - Asian: 24%
  - Hispanic: 11%
  - No response: 24%

- **Gender**
  - Female: 54%
  - Male: 46%

- **First Generation**: 30%
- **Total Count**: 37

*Note: The map indicates the distribution of participants across various locations in the United States.*

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## NHERI Summer Institute Day 1

**Wednesday, June 5, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:30am</td>
<td><strong>Breakfast</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>8:00-8:30am</td>
<td><strong>Registration</strong></td>
<td>UTSA Downtown Campus, Duran Building - Lobby</td>
</tr>
<tr>
<td>8:30-9:45am</td>
<td><strong>Welcome &amp; NHERI Overview</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>9:45-10:15am</td>
<td><strong>Coffee and Networking</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>10:15am-12:00pm</td>
<td><strong>NHERI Science Plan Discussion</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>12:00pm-1:00pm</td>
<td><strong>Lunch</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>1:00-2:30pm</td>
<td><strong>Grant Writing Workshop - Research 101</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>2:30-3:00pm</td>
<td><strong>Coffee and Networking</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>3:40-5:00pm</td>
<td><strong>CAREER Award Workshop</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>4:30-5:00pm</td>
<td><strong>Reflections and Day 1 Evaluations</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>5:30pm</td>
<td><strong>San Antonio Excursion</strong></td>
<td>Meet in Duran Building</td>
</tr>
</tbody>
</table>

## NHERI Summer Institute Day 2

**Thursday, June 6, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:30-8:00am</td>
<td><strong>Breakfast</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>7:45-8:00am</td>
<td><strong>Registration</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>8:00-12:30pm</td>
<td><strong>NHERI Experimental Facilities &amp; Research Presentations</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>12:30-1:30pm</td>
<td><strong>Networking Lunch</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>1:30-4:30pm</td>
<td><strong>Designing a NHERI Research Proposal</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>3:00-3:15pm</td>
<td><strong>Networking Break</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>3:15-4:30pm</td>
<td><strong>Proposal Presentations</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>4:30-5:00pm</td>
<td><strong>NHERI and CAREER-Awardee Panel</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>5:30-7:30pm</td>
<td><strong>NHERI User Forum Networking Event</strong></td>
<td>Mi Tierra Café &amp; Bakery</td>
</tr>
</tbody>
</table>

## NHERI Summer Institute Day 3

**Friday, June 7, 2019**

<table>
<thead>
<tr>
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<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:30am</td>
<td><strong>Breakfast</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>8:00-8:30am</td>
<td><strong>Registration</strong></td>
<td>UTSA Downtown Campus, Duran Building - Lobby</td>
</tr>
<tr>
<td>8:30am-10:00pm</td>
<td><strong>Broader Impacts Design</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>10:00-10:20pm</td>
<td><strong>Networking Break</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>10:20-12:00pm</td>
<td><strong>Proposal Working Meetings</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>12:00-12:45pm</td>
<td><strong>Networking Lunch</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>12:45-2:00pm</td>
<td><strong>Proposal Presentations</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td>2:00-2:30pm</td>
<td><strong>Awards and Reflection</strong></td>
<td>La Villita Room</td>
</tr>
</tbody>
</table>

### NHERI Leadership Meetings

- **All Day**
  - User Form Meeting
  - NAC Meeting
- **1:30-4:30pm**
  - NAC Meeting
  - Joint User Forum and NAC Meeting
- **3:00-4:00pm**
  - ECO Committee Meeting
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<td><strong>Welcome &amp; NHERI Overview</strong></td>
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</tr>
<tr>
<td><strong>Presenter:</strong> JoAnn Browning</td>
<td>Dean, College of Engineering, University of Texas at San Antonio</td>
<td></td>
</tr>
<tr>
<td><strong>Presenter:</strong> Billy Edge</td>
<td>Professor Emeritus, Texas A&amp;M University</td>
<td></td>
</tr>
<tr>
<td><strong>Presenter:</strong> Zhijian (ZJ) Pei</td>
<td>Professor, Texas A&amp;M University</td>
<td></td>
</tr>
<tr>
<td>9:45-10:15am</td>
<td><strong>Coffee and Networking</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>10:15am-12:00pm</td>
<td><strong>NHERI Science Plan Discussion</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td><strong>Presenter:</strong> Billy Edge</td>
<td>Professor, Department of Sociology, University of Colorado Boulder</td>
<td></td>
</tr>
<tr>
<td><strong>Presenter:</strong> Zhijian (ZJ) Pei</td>
<td>Presenter, Texas A&amp;M University</td>
<td></td>
</tr>
<tr>
<td><strong>Presenter:</strong> Joy M. Pauschke</td>
<td>Program Director, National Science Foundation</td>
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</tr>
<tr>
<td>12:00-1:00pm</td>
<td><strong>Welcome Luncheon</strong></td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>1:00-2:30pm</td>
<td><strong>Grant Writing Workshop – Research 101</strong></td>
<td>La Villita Room</td>
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<td><strong>San Antonio Excursion</strong></td>
<td>Meet in Durango Building</td>
</tr>
<tr>
<td></td>
<td><strong>San Antonio Riverwalk – Go Rio Boat Tour</strong></td>
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</tr>
</tbody>
</table>

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.

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.

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.

Participants will collaborate on 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.

Participants will collaboratively design a research proposal which incorporates NHERI experimental facility (EF), simulation center, cyber infrastructure, and RAPID resources, along with the use of social science components to engage the broader impacts of the proposed work.

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.

Participants 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.

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<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30-8:00am</td>
<td>Breakfast</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>7:45-8:00am</td>
<td>Registration</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>8:00-12:30pm</td>
<td><strong>NERI Experimental Facilities &amp; Research Presentations</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td></td>
<td>Florida International University</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University of Washington</td>
<td></td>
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<tr>
<td></td>
<td>Lehigh University</td>
<td></td>
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<tr>
<td></td>
<td>The University of Texas-Austin</td>
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<td></td>
<td>Oregon State University</td>
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<td></td>
<td>University of California-Davis</td>
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<tr>
<td></td>
<td>University of California-San Diego</td>
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<tr>
<td></td>
<td>University of California-Berkeley</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University of Florida</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The University of Texas-Austin TACC</td>
<td></td>
</tr>
<tr>
<td>12:30-1:30pm</td>
<td>Networking Lunch</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>1:30-3:00pm</td>
<td>Social Science Research and Overview of CONVERGE</td>
<td>La Villita Room</td>
</tr>
<tr>
<td></td>
<td>CONVERGE, University of Colorado – Boulder</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Presenters:</strong> 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</td>
<td></td>
</tr>
<tr>
<td>3:00-3:15pm</td>
<td>Networking Break</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>3:15-4:30pm</td>
<td>Designing a NHERI Research Proposal</td>
<td>La Villita Room</td>
</tr>
<tr>
<td></td>
<td><strong>Facilitators:</strong> JoAnn Browning &amp; Karina Vielma</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>4:30-5:00pm</td>
<td><strong>NERI and CAREER Awardee Panel</strong></td>
<td>La Villita Room</td>
</tr>
<tr>
<td></td>
<td>Successful awardees will answer questions about the strategies, communications, and planning that went into their proposal preparations.</td>
<td></td>
</tr>
<tr>
<td>5:30-7:30pm</td>
<td><strong>NERI User Forum Networking Event</strong></td>
<td>Mi Tierra Café &amp; Bakery</td>
</tr>
</tbody>
</table>
### NHERI Summer Institute Day 1
**Wednesday, June 5, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:30am</td>
<td>Breakfast</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>8:00-8:30am</td>
<td>Registration</td>
<td>UTSA Downtown Campus, Durango Building – Lobby</td>
</tr>
<tr>
<td>8:30-9:45am</td>
<td>Welcome &amp; NHERI Overview</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>9:45-10:15am</td>
<td>Coffee and Networking</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>10:15am</td>
<td>NHERI Science Plan Discussion</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>12:00pm</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>12:00-1:00pm</td>
<td>Welcome Lunch</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>1:00-2:30pm</td>
<td>Grant Writing Workshop – Research 101</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>2:30-3:00pm</td>
<td>Coffee and Networking</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>3:40-3:00pm</td>
<td>CAREER Award Workshop</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>4:30-5:00pm</td>
<td>Reflections and Day 1 Evaluations</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>5:30pm</td>
<td>San Antonio Excursion – Go Rio Boat Tour</td>
<td>Meet in Durango Building</td>
</tr>
</tbody>
</table>

### NHERI Summer Institute Day 2
**Thursday, June 6, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-10:20am</td>
<td>Networking Break</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>10:20-12:00pm</td>
<td>Proposal Working Meetings</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>12:00-12:45pm</td>
<td>Networking Lunch</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>12:45-2:00pm</td>
<td>Proposal Presentations</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>2:00-2:30pm</td>
<td>Awards and Reflection</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>3:00-3:15pm</td>
<td>Networking Break</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>3:15-4:30pm</td>
<td>Designing a NHERI Res Facilitators: JoAnn Browning</td>
<td></td>
</tr>
<tr>
<td>4:30-5:00pm</td>
<td>NHERI and CAREER / RAPID resources</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>5:00-7:30pm</td>
<td>NHERI User Forum Networking</td>
<td></td>
</tr>
</tbody>
</table>

### NHERI Summer Institute Day 3
**Friday, June 7, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:30am</td>
<td>Breakfast</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>8:00-8:30am</td>
<td>Registration</td>
<td>UTSA Downtown Campus, Durango Building – Lobby</td>
</tr>
<tr>
<td>8:30am-10:00pm</td>
<td>Broader Impacts Design</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>10:00-10:20am</td>
<td>Networking Break</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>10:20-12:00pm</td>
<td>Proposal Working Meetings</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>12:00-12:45pm</td>
<td>Networking Lunch</td>
<td>Riverwalk Room</td>
</tr>
<tr>
<td>12:45-2:00pm</td>
<td>Proposal Presentations</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>2:00-2:30pm</td>
<td>Awards and Reflection</td>
<td>La Villita Room</td>
</tr>
<tr>
<td>3:00-4:00pm</td>
<td>ECO Committee Meeting</td>
<td>El Paseo B Room</td>
</tr>
</tbody>
</table>

### NHERI Leadership Meetings
- All Day: User Form Meeting
- 1:30-4:30pm: NIAC Meeting
- 2:30-3:30pm: Joint User Forum and NIAC Meeting
- 3:00-4:00pm: ECO Committee Meeting
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: SciCenter Training in Natural Hazards Engineering, June 13-14, announce at designsafe-ci.org
- DEADLINE EXTENDED: Joint U of Florida & U of Washington NHERI workshops, May 23-24, announce at designsafe-ci.org
- SciCenter 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
- Oracle/AGC/CFEE Blind Prediction Competition, announce at designsafe-ci.org
- NHERI Monthly Recap, May 2019, announce at designsafe-ci.org
- REMINDER: SciCenter 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

Feature Stories + News Releases

93 articles

“Announce” Internal Newsletter

1994 subscribers

DesignSafe Slack Channel

1278 subscribers
Communications

**NEWS ROOM**

**Feature Stories + News Releases**

- **93 articles**

**“Announce” Internal Newsletter**

- **1994 subscribers**

**DesignSafe Slack Channel**

- **1278 subscribers**

**Natural Hazards Weekly Newsletter**

- **66 issues**
- **200+ subscribers**
- **Up 238%**

**DesignSafe Radio Podcasts**

- **54 episodes**
- **2,299+ downloads**

**LINKS to RESOURCES**

- **Event Calendar**
- **NHERI Logos and Templates**
- **DesignSafe Slack Channel**
EXTERNAL COMMUNICATIONS

Master E-mail list:
470 subscribers

Publications referencing NHERI: 118 Total

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

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

5000 people reached
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

SUCCESSES:
• 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

<table>
<thead>
<tr>
<th>Facility</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>UT Austin</td>
<td>@NHERIatUTMobileShakers</td>
<td>@UTMobileShakers</td>
<td></td>
</tr>
<tr>
<td>UC San Diego</td>
<td>@UCSD.NHERI</td>
<td>@NHERI_UCSD</td>
<td></td>
</tr>
<tr>
<td>UC Davis</td>
<td></td>
<td></td>
<td>CGM Facebook Group</td>
</tr>
<tr>
<td>Lehigh University</td>
<td>@NHERILehighRTMD</td>
<td>@NHERILehighRTMD</td>
<td></td>
</tr>
<tr>
<td>University of Florida</td>
<td></td>
<td></td>
<td>#ufNHERI</td>
</tr>
<tr>
<td>Florida International University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oregon State University</td>
<td></td>
<td>@NheriOsu</td>
<td></td>
</tr>
<tr>
<td>NHERI SimCenter</td>
<td>@NHE_SimCenter</td>
<td>@NHERI_SimCenter</td>
<td></td>
</tr>
<tr>
<td>RAPID</td>
<td>@RAPIDNaturalHazardsRecon</td>
<td>@NHERI_RAPID</td>
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</tr>
<tr>
<td>NHERI NCO</td>
<td>@NaturalHazardsEngineeringResearchInfrastructure</td>
<td>@NHERI_NCO</td>
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</tr>
<tr>
<td>CONVERGE</td>
<td></td>
<td>@NHERI_CONVERGE</td>
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</tbody>
</table>
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 7th 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
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.

• 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.

• 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 28th; REU 2 began June 17th
• 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 17th
  – 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**

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

### 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)