

NHERI GSC

November General Meeting



2024



NHERI GSC 
Graduate Student Council

Agenda

11:00-11:10 Welcome & Announcements

11:10-11:45 Dr. JoAnn Browning

11:45-11:55 Questions

11:58-12:00 Wrap up

12:00-12:30 RSR Meetings



CALL FOR ABSTRACTS

EMI 2025

MECHANICS FOR A SUSTAINABLE FUTURE

May 27-30

University of California, Irvine | Anaheim, CA USA

TOPICS INCLUDE

- Probabilistic Mechanics
- Mechanics of Materials
- Fluid Mechanics
- Computational Mechanics
- Data-driven Methods
- Structural Health Monitoring
- Multiscale and Multiphysics
- Geomechanics and Geomaterials
- Biomechanics and Bio-inspired Engineering
- Damage and Fracture Mechanics
- Material Science
- Sustainability and Resilience of Civil Infrastructure

**Submit Abstracts by
December 1st**

**Submit
your
abstract!**



STUDENT COMPETITIONS

May 27-30, Anaheim, CA

- Computational Mechanics
- Dynamics
- Elasticity
- Fluid Dynamics
- Granular Materials
- Machine Learning
in Mechanics
- Objective Resilience
- Modeling Inelasticity
and Multiscale Behavior
- Poromechanics
- Probabilistic Methods
- Properties of Materials
- Structural Health
Monitoring and Control
- Structural Stability

www.emi-conference.org



UCI Samueli
School of Engineering
University of California, Irvine



Call for Submissions

Check
out the
website!



NHERI GSC
Graduate Student Council

Conference Opportunities!

Conference	Dates	Abstract
AAG: 2025 American Association of Geographers	March 24-25, 2025	Closed
EMI: ASCE Engineering Mechanics Institute	May 27-30, 2025	December 1, 2024
IWSHM: International Workshop on Structural Health Monitoring	September 2025	February 1, 2025
YCSEC: Young Coastal Scientist and Engineers Conference	April 3-4, 2025	December 20, 2024
ACWE: 15th Americas Conference for Wind Engineering	May 19-25, 2025	Closed
ANNSIM: Annual Modeling & Simulation Conference	May 26th-29th, 2025	Open, Paper deadline Jan. 19, 2025
Geotechnical Frontiers Conference	March 2-5, 2025	Closed
Natural Hazards Workshop	July 13-16, 2025	Unknown



Conference Opportunities!

Conference	Dates	Abstract
AGU24: American Geophysical Union	December 9-13, 2024	Closed
Forensic Engineering Congress	November 4, 2024	Closed
Society of Risk Analysis Conference	December 8-12, 2024	Closed
IMAC	February 10-13, 2025	Closed
American Sociological Association Virtual	January 30-31, 2025	Closed
Association for Public policy Analysis & Management	November 21st- 23rd, 2024	Closed
NHERI Computational Symposium	February 5-7, 2025	Closed

Abstracts are closed but registration is open.



NHERI GSC Research Subcommittee Meetings!

Group Breakout Rooms!

Breakout Rooms (30 Minutes):

1. Social Science Subcommittee (Erin Boyle):

- Discuss volunteering at the 50th Annual Natural Hazards Workshop

2. Simulation & Computational Methods Subcommittee (Bijan Sayyafzadeh and Pooria Mazaheri):

- Introduce RSR activities (10 mins)
- Presentation by Pooria Mazaheri on research and Q&A : (10 min)
 - Title: *"Risk Assessment for Transmission Lines Under Wind Extremes"*
- Discuss the next activities for the RSRs and getting familiar with the members

Presented by:

Pooria Mazaheri
Chair of Research

Erin Boyle
RSR of Social Science

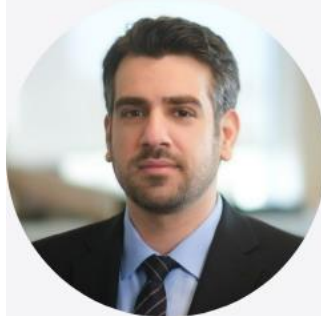
Bijan Sayyafzadeh
RSR of Simulation &
Computational Methods



Registration!



NATALIE COLEMAN
US Army Corps of
Engineers



REZA FILIZADEH
Simpson Gumpertz
& Heger



KARIM MOSTAFA
Wiss, Janney, Elstner
Associates, Inc.



EDWIN RAJEEV
Cummins
Cederberg

**November
22nd**

Friday, 12:00 pm CT

**NHERI GSC
WORKSHOP:
CAREER IN INDUSTRY OR
GOVERNMENT SECTOR**

Register today:

https://bit.ly/2024NHERIGSC_IndustryPanel



NHERI GSC 
Graduate Student Council

NSF NHERI Summer Institute

GSC members who attend 2 meetings between August 1, 2024-February 23, 2024, are eligible to apply for funding to apply for the Institute.

Info Sessions

Learn more about the NSF
NHERI Summer Institute @
5:00 pm Central Time

bit.ly/2025NHERI_SummerInstitute_InfoSessions

- December 5, 2024
- January 28, 2024

Apply



Speaker Introduction



Dr. JoAnn Browning

Interim Vice President for
Research

Office of Research

The University of Texas at San
Antonio

joann.browning@utsa.edu





NHERI History, Structure, and Resources

NHERI GSC

November 15, 2024

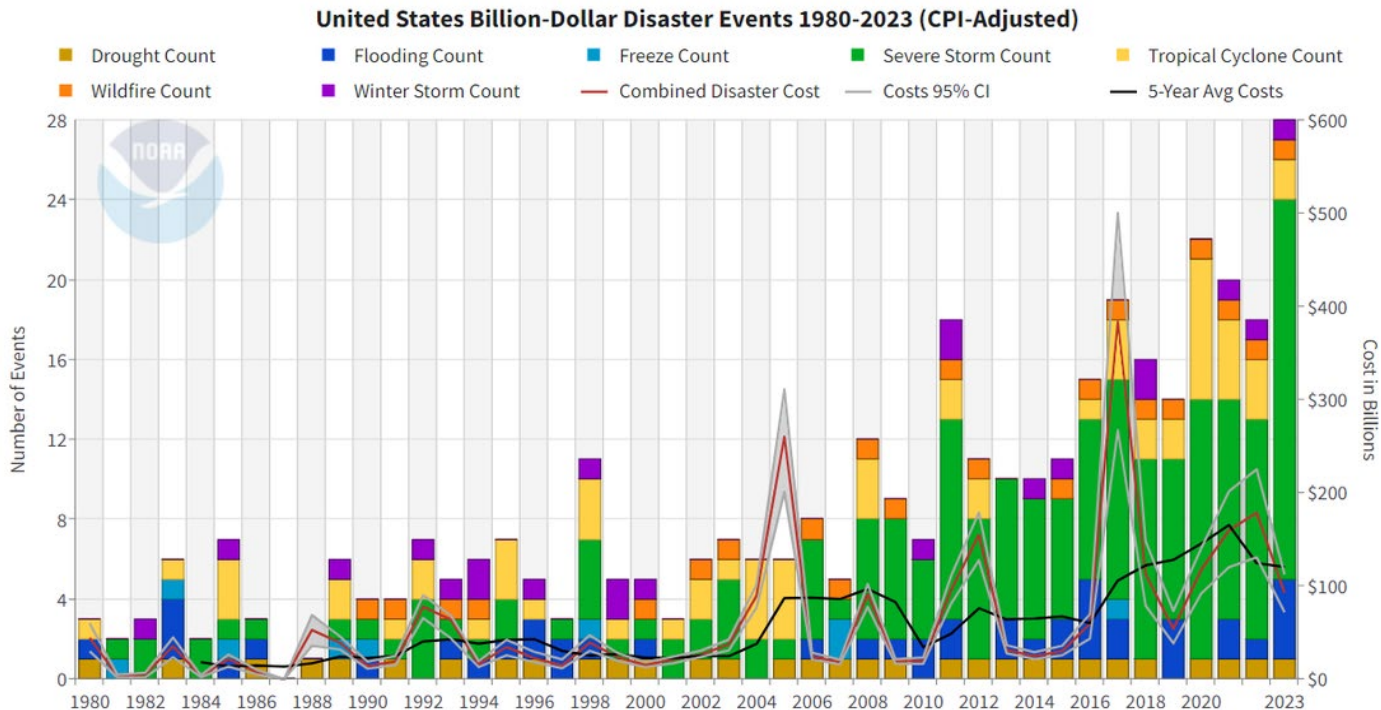
JoAnn Browning, VPR UTSA

NHERI-Network Coordination Office (NCO)

CMMI-2129782



Why NHERI



www.climate.gov: NOAA NCEI



Why NHERI

Hypothetical 7.2 magnitude earthquake on Hayward fault near San Francisco:

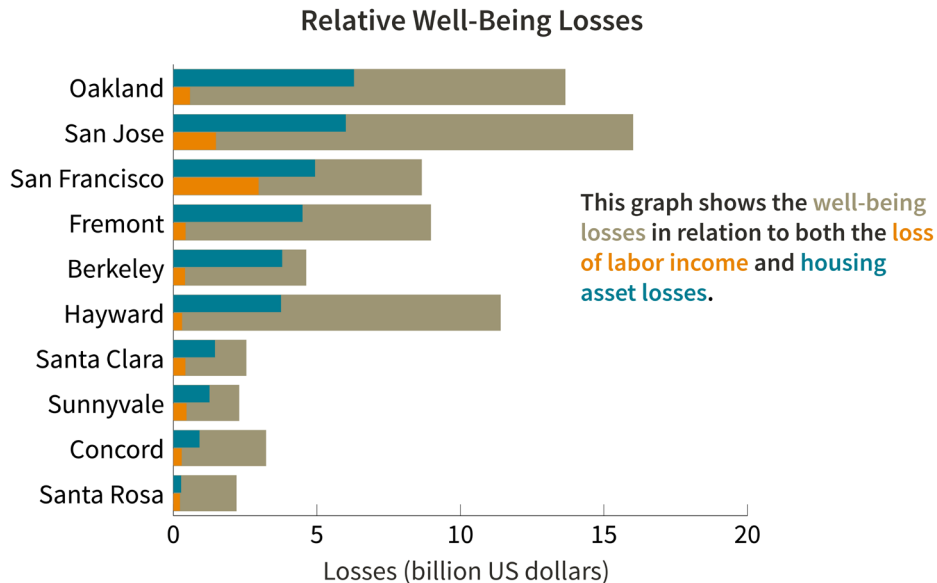


Chart B. This chart shows how, in every city, the losses of well-being during the recovery period after a hypothetical earthquake greatly exceed actual property damages. This difference is most pronounced in cities with large populations of low-income people, who have less savings, insurance and other resources to cushion the loss. The new Stanford study enables policymakers to understand and plan for these previously unaccounted human costs of earthquake recovery. Credit: Farrin Abbott

Large Testing Facilities

George E. Brown, Jr.

Network for Earthquake Engineering Simulation (NEES)

2004 - 2014

NSF Network for Earthquake Engineering Simulation
(NEES) 2004 – to date

*Transform our ability to carry out research vital to reducing
vulnerability to catastrophic earthquakes*



...next generation...



What is NHERI?



Mission of NHERI: to enable research and educational advances that can contribute knowledge and innovation to improve the resilience of the civil infrastructure against earthquakes, tsunamis, windstorms and storm surge.





...next generation....



NHERI NCO Vision

...To serve as a focal point and leader of a multi-hazards research community focused on mitigating the impact of future earthquakes and windstorms and related hazards...



Mexico Beach – Hurricane Michael 2018



**NHERI Collaboration with
E-Defense in Japan**



NCO Strategic Goals

Leadership

- Bring communities together
- Coordinate NHERI to be more than the sum of individual contributions

Research

- Clear and fair access to experimental facilities
- Road map for high-impact research

Education and Community Outreach

- Workforce development
- Dissemination of NHERI Impact



*Bolivar Island, TX,
after Hurricane Ike, 2008*



NCO Leadership

NIAC (Advisory Council)
NHERI Council (PIs)
User Forum

Education
Communications
Research Facilities Liaisons

Technology Transfer
Science Plan
Operations & Technology



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)



Robin Nelson
*Post-doctoral Fellow
University of Texas at San Antonio*
Leadership Role and Expertise

- Member, NCO Strategic Committee
- Education Specialist with ECO
- Chair of ECO Committee



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



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



William T. Holmes
*Structural Engineer, Private Practice
Oakland, California*
Leadership Role and Expertise

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



Ian Robertson
*Professor of Structural Engineering
University of Hawaii, Manoa*
Leadership Role and Expertise

- Member, NCO Strategic Committee
- Expert in Tsunami Research
- Leader for Science Plan



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)



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



David R. Johnson
*Associate Professor of Industrial
Engineering and Political Science
Purdue University*
Leadership Role and Expertise

- Member, NCO Strategic Committee
- Leader in Social Sciences and Policy



Thomas L. Smith
*Architect
TLSmith Consulting Inc.*
Leadership Role and Expertise

- Member, NCO Strategic Committee
- Leader in Wind Engineering and Architectural Practice



Karina Vielma
*Assistant Professor, Engineering
Education
University of Texas at San Antonio*
Leadership Role and Expertise

- Member, NCO Strategic Committee
- Engineering Education Specialist
- Director of REU and SI Programs



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



Marti LaChance
Purdue University
Expertise

- Communications Specialist



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



NHERI DesignSafe

https://www.designsafe-ci.org



Log in Register

Use DesignSafe Learning Center NHERI Facilities NHERI Community News Help

Search DesignSafe Website Datasets



- Getting Started
- DesignSafe FAQ
- Virtual Office Hours
- Submit a Ticket
- My Tickets



The DesignSafe Data Depot Repository is a Certified Data Repository by the Core Trust Seal



Browse Data Publications



Data Reuse

View metrics and read case studies about how researchers are reusing data.

[READ ABOUT DATA REUSE](#)

Research Projects & Experiments

Explore the Facility Scheduling Dashboard.



Training & Events

NOVEMBER 13, 2024

Neural Operators: Advancing Real-Time Structural Response
Online

NOVEMBER 14-15, 2024

2024 NHERI NSF Wall of Wind Experimental Facility User Workshop
Miami, FL

FEBRUARY 5 - 7, 2025

<https://www.designsafe-ci.org/#> Hurricane Helene: NSF-Funded Natural Hazards Experts Ready for Comment



NHERI Access & 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 and Industry

FACILITY SCHEDULING DASHBOARD
Centralized management for NSF-funded awards using NHERI

At any given time, dozens of research projects are underway at NHERI's eight Experimental Facilities. The Facility Scheduling Dashboard provides researchers with a centralized location for managing project experiments and offers a public view of the work underway at NHERI facilities.

The NHERI Network Coordination Office (NCO) oversees NHERI's centralized scheduling and will be rolling out phased updates to the Scheduling Dashboard.

Questions? Contact Dan Zehner, NCO Facility Scheduling and Operations Coordinator.

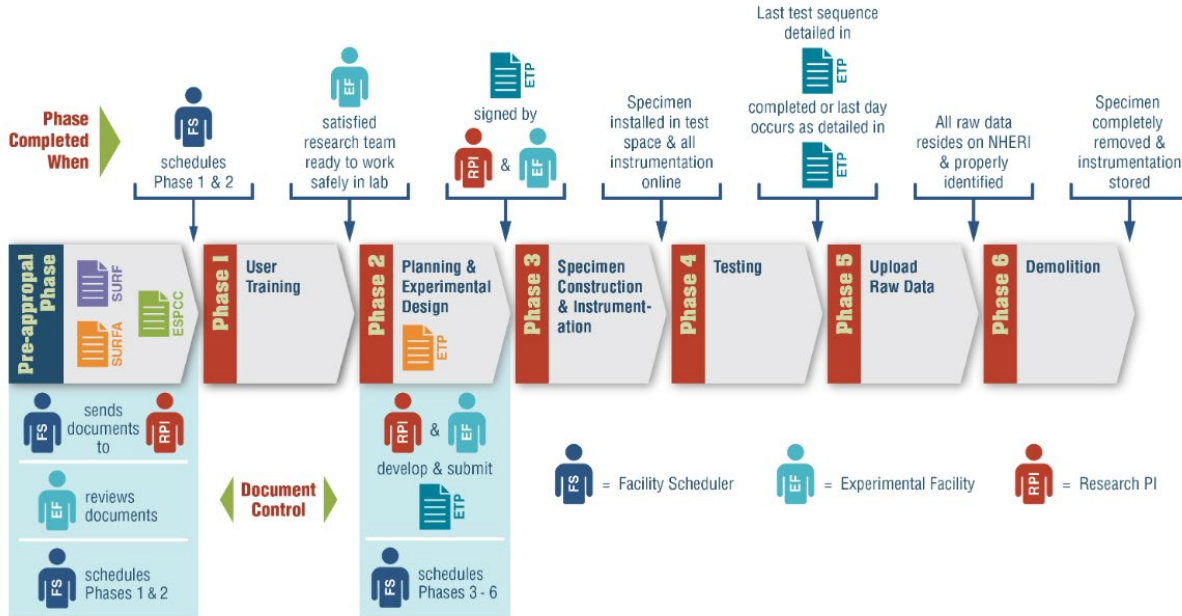
Filters: Show Past Events Sort by:

Estimated Start Date	Estimated End Date	Facility	Award	Event Description	Actions
6/1/2022	12/30/2024	UT Austin	Advancing the Development of Realistic and Probabilistic Shear Wave Velocity Profiles Using Advanced Inversion Strategies <i>NSF CMMI #2109889</i> <i>PI: Clinton Wood</i>	Salvus software training	Contact Facility Request Payload
7/8/2022	6/1/2025	RAPID	RAPID: Characterizing the Trigger and Evolution of the December 2020 Haines, Alaska Landslide <i>NSF CMMI #2114915</i>	Haines, AK Landslide reconnaissance led by Margaret Darrow, UAF	Contact Facility Request Payload



NHERI Access & Funding

FACILITY PROJECT REQUEST



NHERI

NHERI - Site Utilization Request Form (SURF)
 NCO Form SURF-2016 v1.0

This form should be filled-out by researchers requesting use of NHERI Equipment Site(s)

Project Status:		Short Title:	
PI Name:		PI Home Institution:	Project Type:
Funding Agency # 1:	Funding Agency # 2:	Funding Agency # 3:	
Award Start Date (MM/DD/YYYY):	Award Start Date (MM/DD/YYYY):	Award Start Date (MM/DD/YYYY):	
Award End Date (MM/DD/YYYY):	Award End Date (MM/DD/YYYY):	Award End Date (MM/DD/YYYY):	
Proposal Deadline (MM/DD/YYYY):	Proposal Deadline (MM/DD/YYYY):	Proposal Deadline (MM/DD/YYYY):	
Anticipated Award Amount (USD):	Anticipated Award Amount (USD):	Anticipated Award Amount (USD):	
Total Anticipated Awarded Amount (USD):			
(1) First NHERI Equipment Facility To Be Used:		(2) Second NHERI Equipment Facility To Be Used:	
PHASE 1 Anticipated Site Occupancy Start Date (MM/DD/YYYY): Anticipated Site Occupancy End Date (MM/DD/YYYY): PHASE 2 Anticipated Site Occupancy Start Date (MM/DD/YYYY): Anticipated Site Occupancy End Date (MM/DD/YYYY):		PHASE 1 Anticipated Site Occupancy Start Date (MM/DD/YYYY): Anticipated Site Occupancy End Date (MM/DD/YYYY): PHASE 2 Anticipated Site Occupancy Start Date (MM/DD/YYYY): Anticipated Site Occupancy End Date (MM/DD/YYYY):	
(3) Third NHERI Equipment Facility To Be Used:		(4) Fourth NHERI Equipment Facility To Be Used:	
PHASE 1 Anticipated Site Occupancy Start Date (MM/DD/YYYY): Anticipated Site Occupancy End Date (MM/DD/YYYY): PHASE 2 Anticipated Site Occupancy Start Date (MM/DD/YYYY): Anticipated Site Occupancy End Date (MM/DD/YYYY):		PHASE 1 Anticipated Site Occupancy Start Date (MM/DD/YYYY): Anticipated Site Occupancy End Date (MM/DD/YYYY): PHASE 2 Anticipated Site Occupancy Start Date (MM/DD/YYYY): Anticipated Site Occupancy End Date (MM/DD/YYYY):	
Project Summary (max 6000 character):			
Summary of Facility Requirements (max 6000 character):			



NHERI Community



- Community Calendar
- User Forum Committee
- Technology Transfer Committee
- DesignSafe Dataset Awards
- Hybrid Simulation Collaboratory (MECHS)
- Social Media
- Branding Toolkit

NHERI

The natural hazard events across the calendar of the announced and

community as well as the events hosted by NHERI.

NDAR

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Announce an Event

This calendar is open to any event relevant to the Natural Hazards Engineering community. To request a new conference, workshop, or other community to be added to the calendar, submit a ticket to DesignSafe, including: event title, dates, and a brief description.

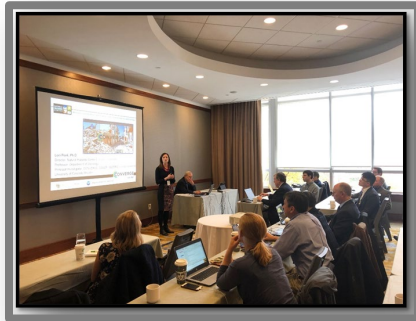
Today < > November 2024 📅 🖨️

SUN	MON	TUE	WED	THU	FRI	SAT
27	28	29	30	31	Nov 1	2
	NAWEA / WindTech 2024 Conference		4pm FIU Wall of Wind pro	19WCSI Abstract Submissi		
3	4	5	6	7	8	9
			4pm FIU Wall of Wind pro			
10	11	12	13	14	15	16
		6pm 2025 NSF NHERI Su	4pm FIU Wall of Wind pro	2024 NSF NHERI Wall of Wind Experimental Facility User		
17	18	19	20	21	22	23
			National Disaster Resilience Conference			
			4pm FIU Wall of Wind pro			

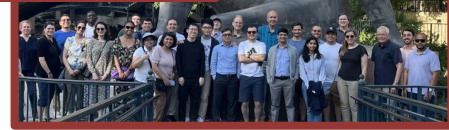
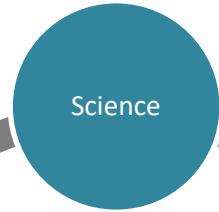
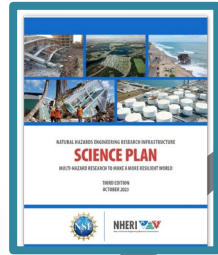


NHERI Amplifies Broader Impacts

Grand Challenges
=> Grand Impact



Technology Transfer



REU-Summer Institute-
Graduate Student Council

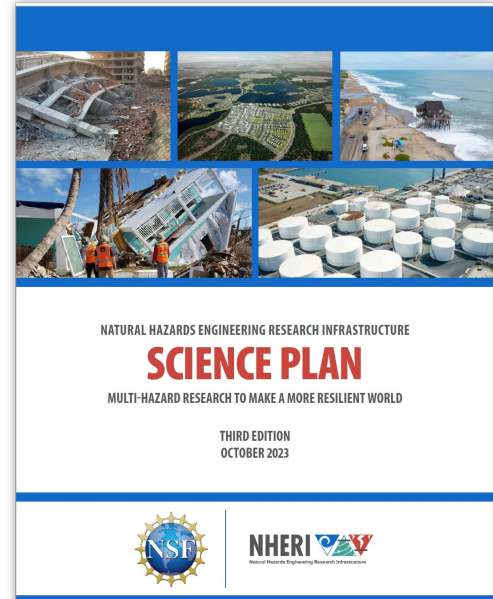


NHERI Science Plan

A 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 isolated and compounding natural hazards with potential to damage civil infrastructure and disrupt communities (earthquakes, tsunamis, windstorms, storm surge and waves, pluvial and fluvial flooding, wildfires)
- Assess vulnerability and adaptive capacity of civil infrastructure and social systems in communities exposed to these hazards
- Create technologies, tools and human resources to support the design, construction, retrofit, and operation of secure and resilient civil infrastructure



NHRI NETWORK COORDINATION OFFICE

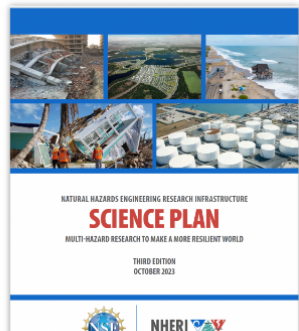
- [NCO Overview](#)
- [NCO Organization](#)
- [Education & Community Outreach \(ECO\)](#)
- [NHRI Governance](#)
- [International Partnerships](#)
- [NHRI Science Plan](#)
- [NHRI Diversity Initiative](#)

NHRI SCIENCE PLAN

A fundamental responsibility of the **NHRI NCO** is to oversee the development of a formal Science Plan. The **NHRI Science Plan** functions as a roadmap for future natural hazards research, ensuring researchers in related disciplines work together to achieve our common goal: keeping the nation's civil infrastructure, and its human inhabitants, safe.

NHRI Science Plan, Third Edition, October 2023.

Robertson, I., A. Bobet, B. Edge, W. Holmes, D. Johnson, M. LaChance, J. Ramirez. (2023) "Natural Hazards Engineering Research Infrastructure, Science Plan, Multi-Hazard Research to Make a More Resilient World, Third Edition." DesignSafe-CI. <https://doi.org/10.17603/ds2-abbs-0966>.



Third Edition Task Group

The following members of the Science Plan Task Group guided the development of the 3rd edition of the five-year NHRI Science Plan:

- **Rachel Adams**, Ph.D., M.P.H, Research Associate, Natural Hazards Center, University of Colorado Boulder
- **Ross W. Boulanger**, Ph.D., P.E., N.A.E., Professor, Department of Civil and Environmental Engineering, University of California, Davis
- **Ann-Margaret Esnard**, Ph.D., Associate Dean, Andrew Young School of Policy Studies, Georgia State University
- **Andrew Kennedy**, Ph.D., Professor, Department of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame
- **Tracy Kijewski-Correa**, Ph.D., Professor, Department of Civil and Environmental Engineering and Earth Sciences and Keough School of Global Affairs, University of Notre Dame
- **Bret Lizundia**, S.E., Principal, Rutherford + Chekene Consulting Engineers
- **Laura Lowes**, Ph.D., Professor, Department of Civil and Environmental

NHERI GRANT RESEARCH

Search for NSF-funded research awards that employ one or more NHERI resources.

The NCO Technology Transfer Committee maintains this database as a way for potential users of NHERI research and other researchers to discover cognate investigations conducted within the NHERI network.

Questions? Contact the NCO Technology Transfer Committee [ttc-inquiry@designsafe-ci.org].

- [TTC Webpage](#)
- Contact TTC: ttc-inquiry@designsafe-ci.org
- [NHERI Scheduler Database](#)
- [NHERI News](#)

Please make your selections and click the Search button to change the listing.

Filter by Facility/Group: Sort by:

Select a Grant Type: Select a Hazard Type: Search Title/Abstract/PI/Co-PI:

Search

Award Number	Title	End Date	PI / Co-PI	Grant Org	NHERI Facility	Details
2310171	CAREER: Accelerating Real-time Hybrid Physical-Numerical Simulations in Natural Hazards Engineering with a Graphics Processing Unit (GPU)-driven Paradigm	Sep 29, 2027	Barbara Simpson	Stanford University	No Facility Listed	View Details
2209190	Large-scale CoPe: Coastal Hazards, Equity, Economic prosperity, and Resilience (CHEER)	Aug 30, 2027	Rachel Davidson / Sarah DeYoung, Meghan Millea, Linda Nozick, Brian Colle	University of Delaware	No Facility Listed	View Details
2145665	CAREER: Accelerating Real-time Hybrid Physical-Numerical Simulations in Natural Hazards Engineering with a Graphics Processing Unit (GPU)-driven Paradigm	Aug 30, 2027	Barbara Simpson	Oregon State University	Oregon State University	View Details
2144760	CAREER: Engineering-Centric Thunderstorm Hazard and Loading Characterization	Apr 29	Franklin Lombardo	University of Illinois at Urbana-Champaign	University of Florida	View Details

NHERI ECO Committee – Lead & Execute



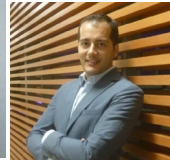
Robin Nelson
(UTSA) Chair



Stephanie Paal
Texas A&M



Sara Hamideh
Stony Brook University



Arindam Chowdhury, Amal Elsayad, Erik Salna, Ioannis Zisis
Florida International University

User Forum



Joseph Saunders
Lehigh University



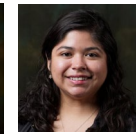
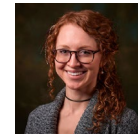
Jason Dejong
Karissa Alacron
UC Davis



Lindsay Carroll, Pedro Lomonaco
& Dan Cox
Oregon State University



Matt Schoettler
UC Berkeley



Candace Evans & Melissa Villareal
UC Boulder



Lelli Van Den Einde
& Joel Conte
UC San Diego



Kurtis Gurley
University of Florida



Charlie Dey, Rosalia Gomez
& Scott Brandenburg
UT Austin-CI



Patricia Clayton
UT Austin Shaker



Laura Lowes & Joseph Wartman
University of Washington

NHERI ECO Committee

Plan & drive activities to engage and expand the NHERI community.

Education and Community Outreach (ECO)



- **Research Experiences for Undergraduates (REU)**
- **Summer Institute**
- **Graduate Student Council**
- **Webinars & other designsafe-ci.org Learning Center resources**

Why a Summer Institute?

Desired Outcomes:

- 1. BUILD COMMUNITY:** Welcome to NHERI!
- 2. BUILD SKILLS:** Develop key portions of a grant proposal
 - Gain strategies and knowledge from NSF
 - Learn details of experimental facilities & site resources
 - Experience educational outreach opportunities & guidance linked to proposal development
- 3. BUILD KNOWLEDGE:** Learn about NHERI resources
- 4. BUILD NETWORK:** Gain interdisciplinary collaboration





NHERI Newsletter June – July 2024

Warm regards to all!

The [NHERI Summer Institute in June](#) was another great success, and right now the students in the 2024 REU cohort are preparing to present their research at the REU Symposium, taking place this year at UC San Diego, August 8-9. See below for more educational activities around the NHERI network.



In this issue, you will read about the NSF-funded CHEER Hub, which is partnering with NHERI's SimCenter and DesignSafe. Also, be sure to read how fundamental research at NHERI UC Davis will improve soil investigations for geotechnical engineers.

As you plan for fall activities, keep in mind that NHERI and the [natural hazards community](#) will be on hand at the 2024 AGU Meeting, December 9-13. We encourage you to consider attending. Also, for the first time, NHERI researchers will present at the [Science Summit at the United Nations General Assembly](#) in September. Stay tuned for details. Be sure to peruse all upcoming events in the community calendar, below.

We encourage DesignSafe users to set up multi-factor authentication for their account by August 5. Find instructions [here](#).

Best regards!

Julio

NHERI RESEARCH:

Aeroelastic Real-Time Hybrid Simulation. I: Validation

Journal of engineering mechanics, Sept 2024. AeroRTHS tests conducted in the Boundary Layer Wind Tunnel at the NHERI University of Florida EF.

NHERI RESEARCH:

GIS-Based Regional Seismic Risk Assessment for Dubai, UAE, Using NHERI SimCenter R2D Application

Buildings. May 1, 2024.

NHERI RESEARCH:

Empirical hurricane fragility assessment of elevated and slab-on-grade residential houses

International Journal of Disaster Risk Reduction, August 2024. Study employed STEER-collected data now available on the DesignSafe Data Depot.

NHERI DATASET:

Characterization and Geotechnical

NHERI FIELD RESEARCH:

StEER-2024 Houston Derecho

NHERI NEWS

The screenshot shows the DesignSafe website interface. At the top, there's a navigation bar with links for 'Use DesignSafe', 'Learning Center', 'NHERI Facilities', 'NHERI Community', 'News', and 'Help'. A search bar is on the right. Below the navigation, the main content area is titled 'NHERI DESIGN SAFE RADIO PODCAST'. A dropdown menu is open over the 'News' link, showing options like 'Latest News', 'NHERI Newsletter Publications', and 'DesignSafe Radio'. The main content area displays a list of podcast episodes with a play button and a waveform visualization for the selected episode, 'Decision-making in disaster risk models Fea...'. To the right, there's a video player showing a woman speaking, titled 'One CAREER Award Story | Di...'. At the bottom, there's a list of episodes with their IDs and durations.





NHERI: Next Generation Natural Hazards Engineering & Science





U. S. National Science Foundation

The U.S. National Science Foundation Natural Hazards Engineering Research Infrastructure network, NSF NHERI, is supported by multiple awards from the U.S. National Science Foundation. The NSF NHERI Network Coordination Office is supported by [CMMI #2129782](#). Any statements in this material are those of the presenter(s) and do not necessarily reflect the views of the National Science Foundation.



An Overview on Simulation & Computational Methods (SCM) Research Subcommittee (RS)

Bijan Sayyafzadeh

SCM Research Subcommittee Representative (RSR)

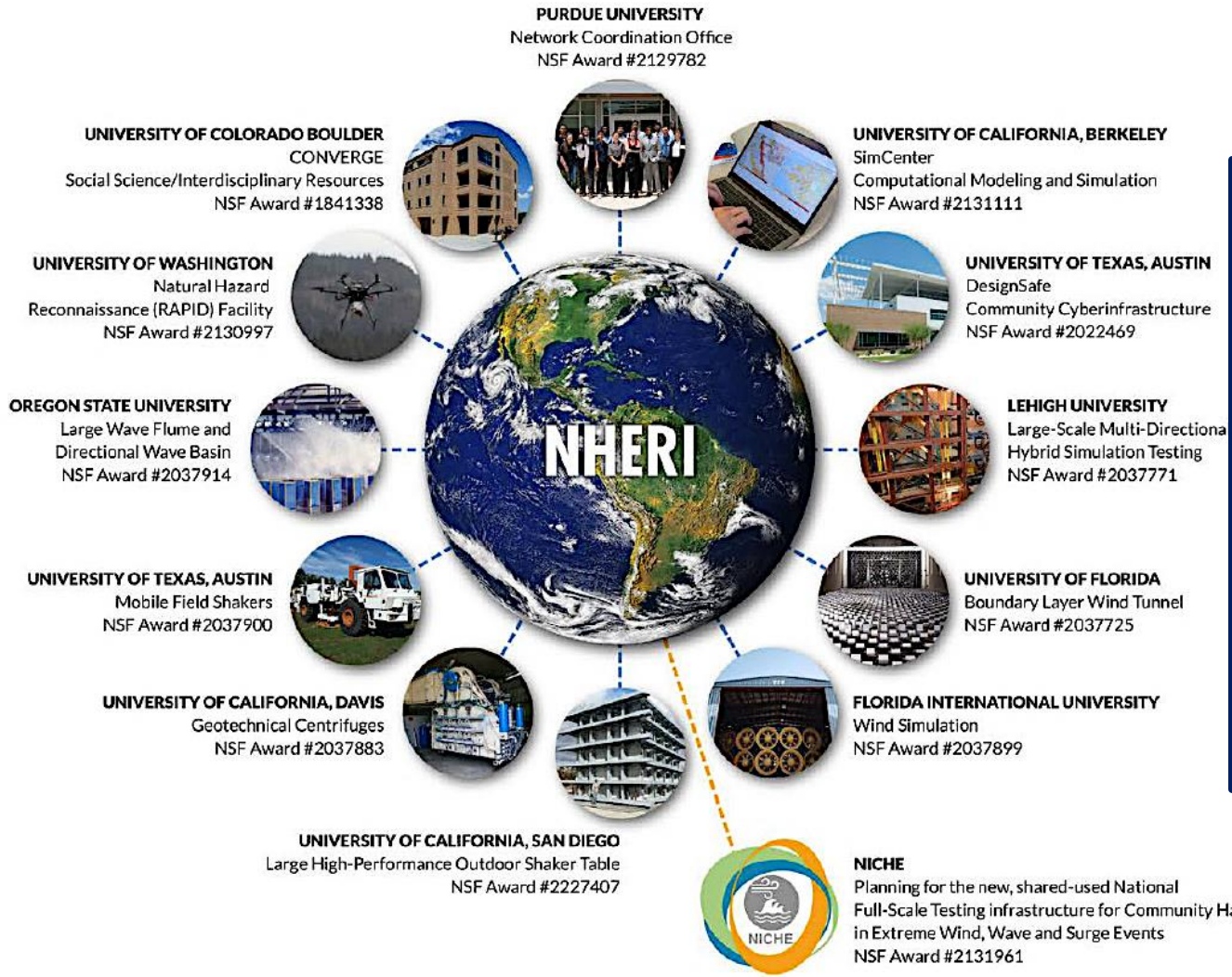
Before We Begin:

What is the Purpose of Simulation?

To develop a model capable of producing a credible prediction of the behavior of an existing/proposed structure.

Frank McKenna
UC Berkeley

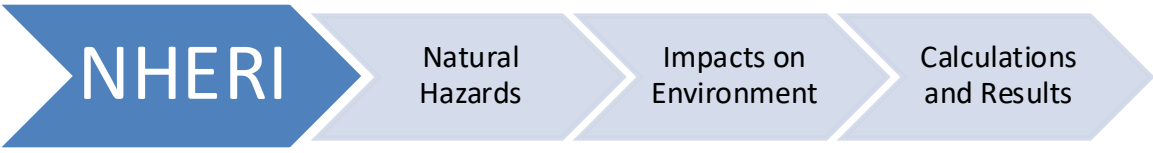
Natural Hazards Engineering Research Infrastructure (NHERI)



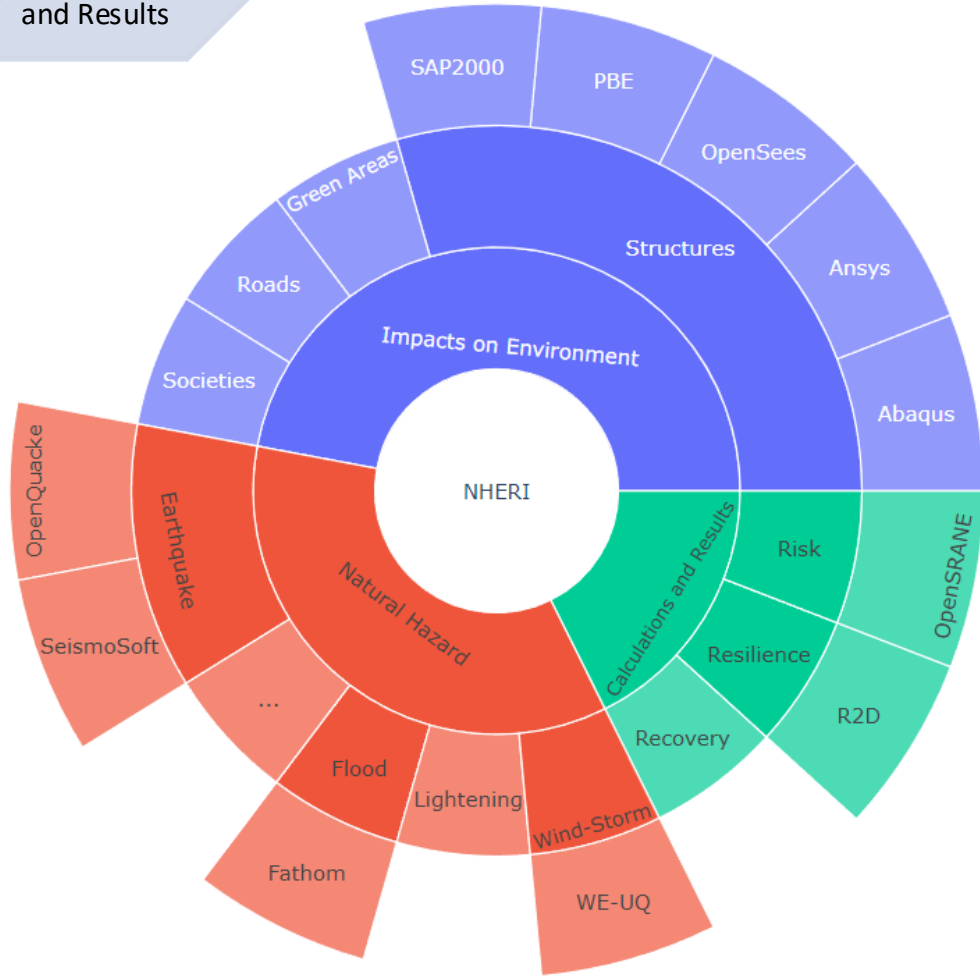
NHERI consist of 13 components that aid in developing ways to mitigate the consequences of natural hazards.



Various Fields and Areas in NHERI



- Many **Software, tools and Applications** for various purposes are developed with various assumptions and algorithms.
- Various modeling techniques have been proposed for them and still there are many challenges for their users.



What are SCM RS goals

- Inviting graduated or under graduate students to **present their studies with emphasize on simulation and modeling aspects** and challenges they encountered with.
- Providing **workshops for introducing various Software and applications** by their producer or professions.
- Trying to **coordinate training courses** for some of most useful software and platforms.



Let's get connected and Join our Subcommittee

Fill the Shared Excel file in the Chat

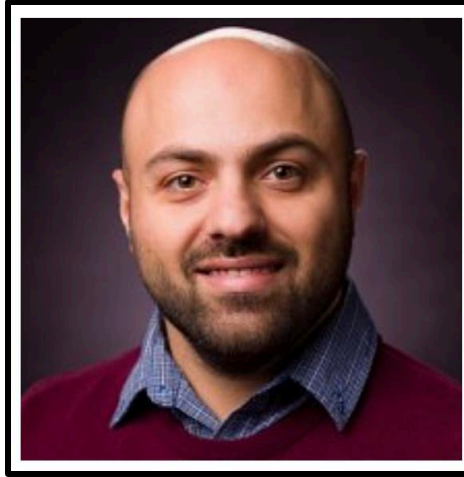
Anything in mind to do in this subcommittee?

Want to share your insight in private? Email me at:

B.Sayyaf@yahoo.com



Today presentation



Pooria Mazaheri

- PhD in structural engineering and is a Research Assistant at Iowa State University
- Chair of Research in NHERI GSC





U. S. National Science Foundation

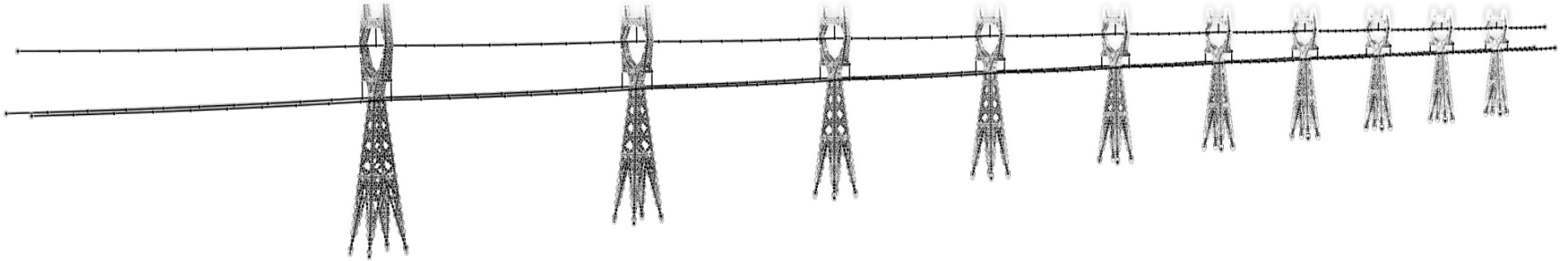
The U.S. National Science Foundation Natural Hazards Engineering Research Infrastructure network, NSF NHERI, is supported by multiple awards from the U.S. National Science Foundation. The NSF NHERI Network Coordination Office is supported by [CMMI #2129782](#). Any statements in this material are those of the presenter(s) and do not necessarily reflect the views of the National Science Foundation.



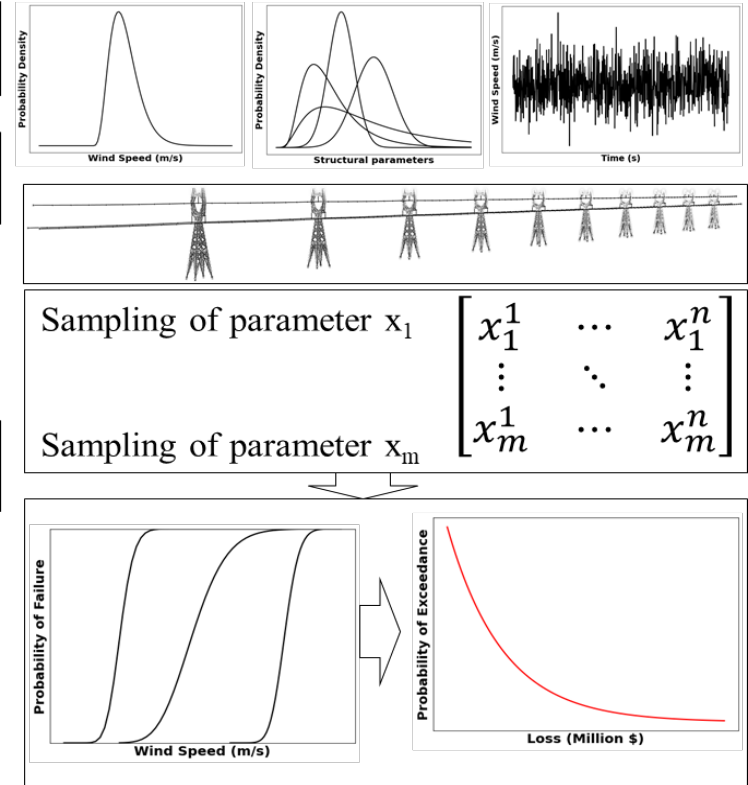
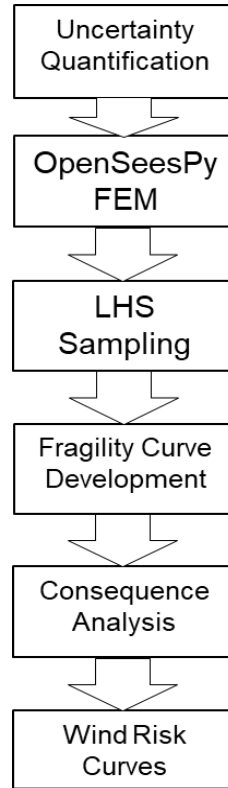
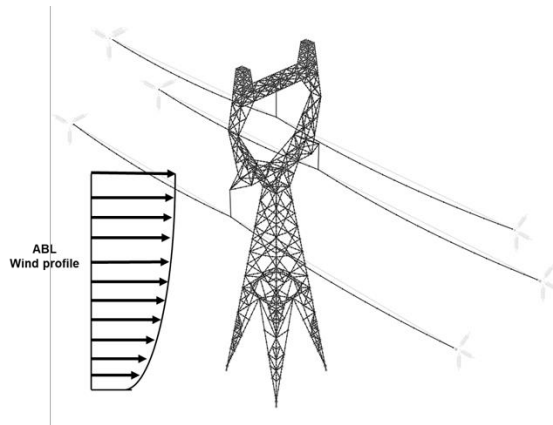
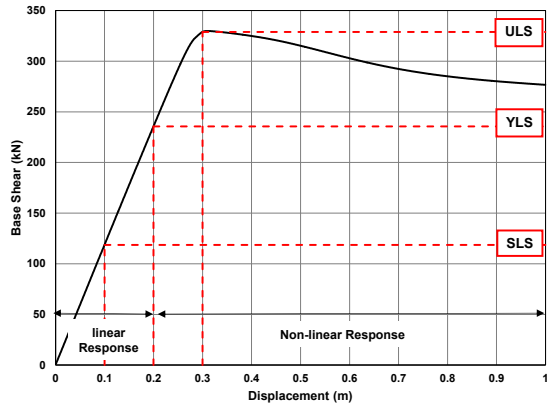
Risk Assessment for Transmission Lines Under Wind Extremes Considering Multiple Failure Criteria

Pooria Mazaheri, PhD Student
Alice Alipour, Associate Professor

Background & Gap

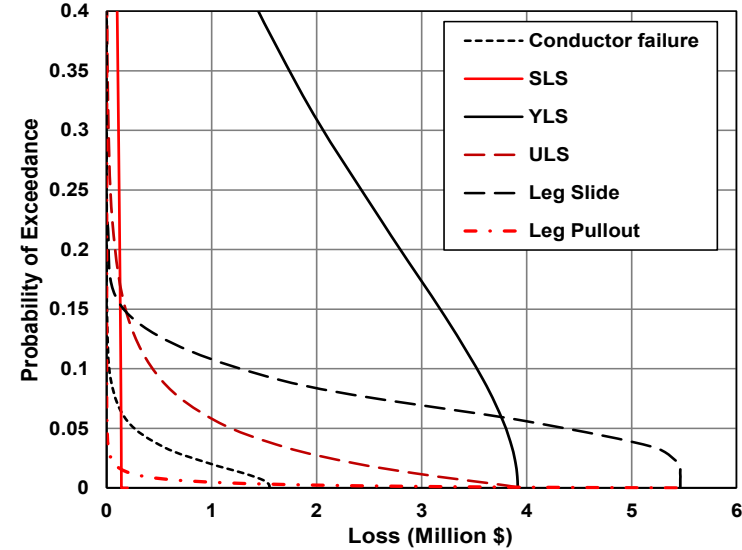


Methods

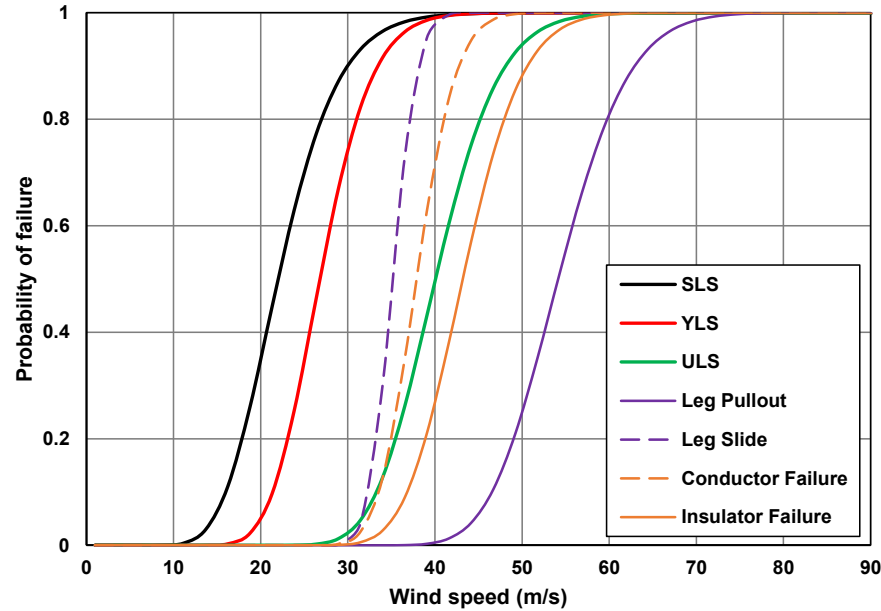
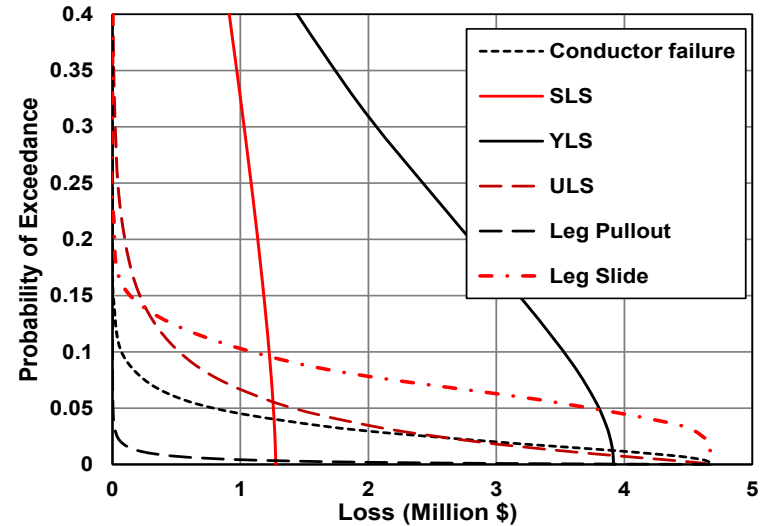


Research Findings & Conclusions

Utility Risk:



Outage Risk:



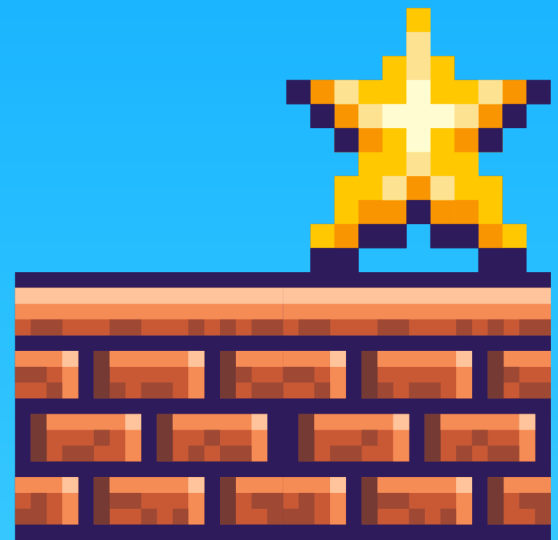


Funding from National Science Foundation CAREER award #1751844 is highly appreciated.

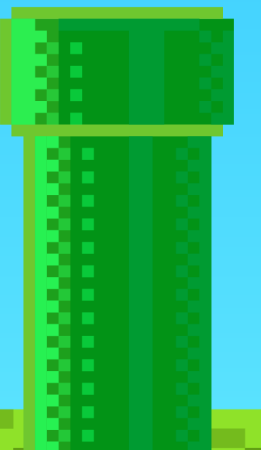
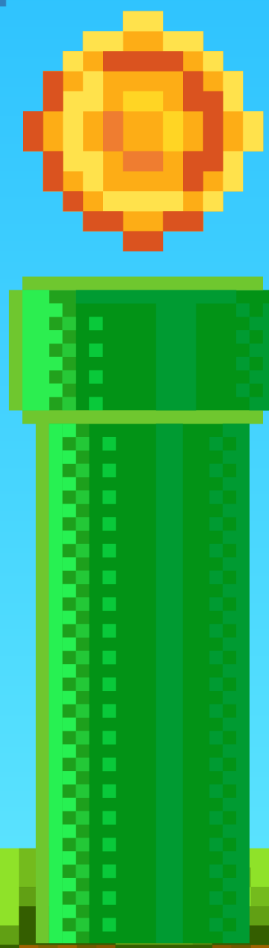
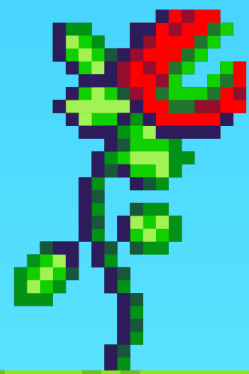


National Science Foundation

NATURAL HAZARDS WORKSHOP



LET'S VOLUNTEER!



50th Annual Workshop

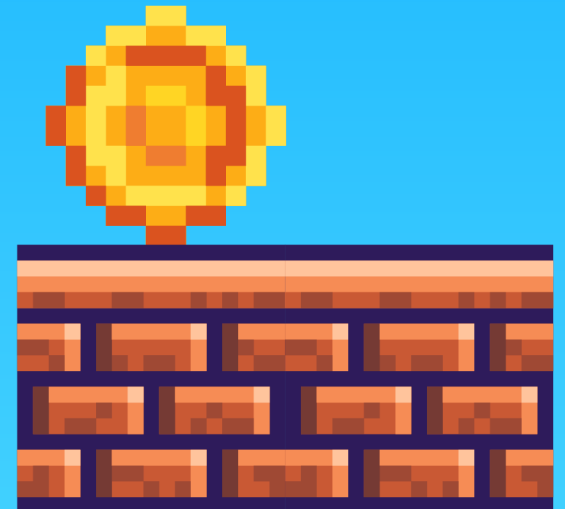
When:

Sunday, July 13 to
Wednesday, July 16, 2025

Wednesday, July 16 to Thursday, July 17, 2025


Where:

500 Interlocken Boulevard,
Broomfield, Colorado, 80021



HOW TO VOLUNTEER

Important Information



Deadline:
January 24,
2025



Link:
<https://hazards.colorado.edu/workshop/2025/workshop-volunteer>

HOW TO VOLUNTEER

Must be enrolled as an undergrad or graduate student

No C.V., Resume, or Additional Documents are Needed for the Application

What is your interest in studying hazards and disasters? (Limit 250 words)

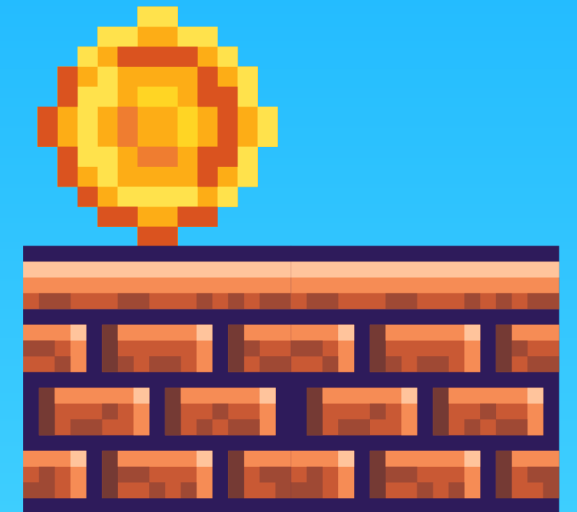
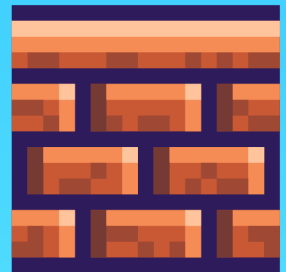
Why would you like to participate in the Natural Hazards Workshop specifically? (Limit 250 words)

What specific qualities would make you a good candidate to volunteer for the Natural Hazards Workshop? (Limit 250 words)

Apply!

The Benefits:

- free registration for the event
- Free meals
- network with peers and respected professionals in the field.



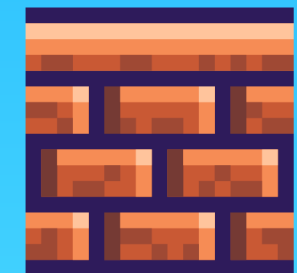
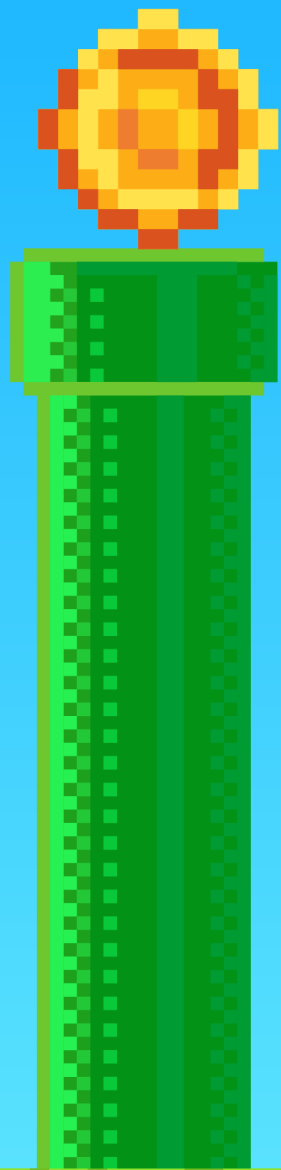
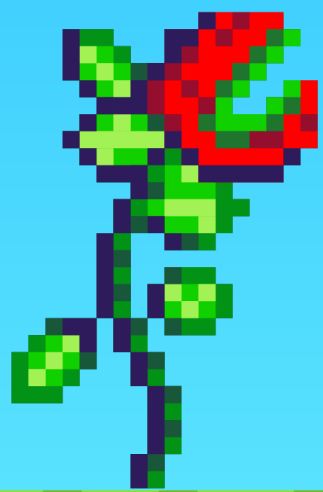
Apply!

Advice From volunteer Coordinators

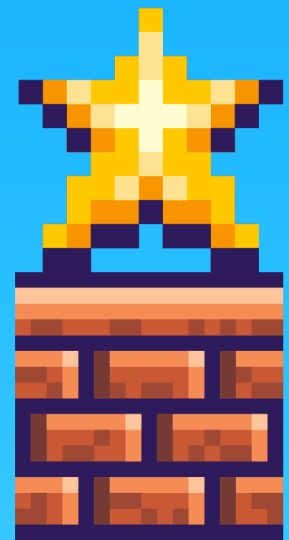
a. Experience organizing or volunteering

b. provide plenty of detail on past experiences where you took on a role that would make you a responsible volunteer

c. Attentiveness to inequality and inclusivity in research and personal life also add to the strength of the application



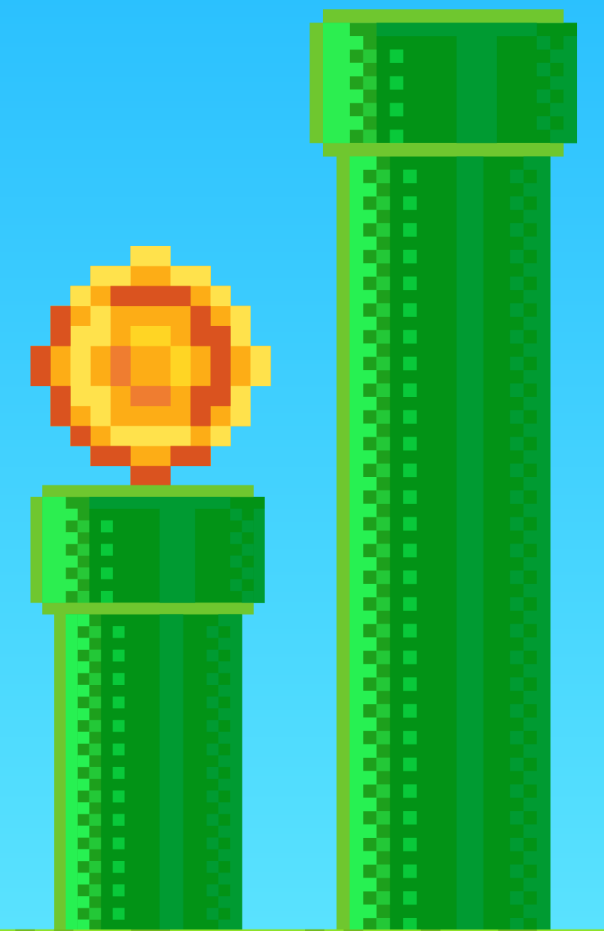
Ask A Question



Student Volunteer Program
Musabber Ali Chisty
Musabber.Chisty@colorado.edu

or

Brigid Mark
Brigid.Mark@colorado.edu



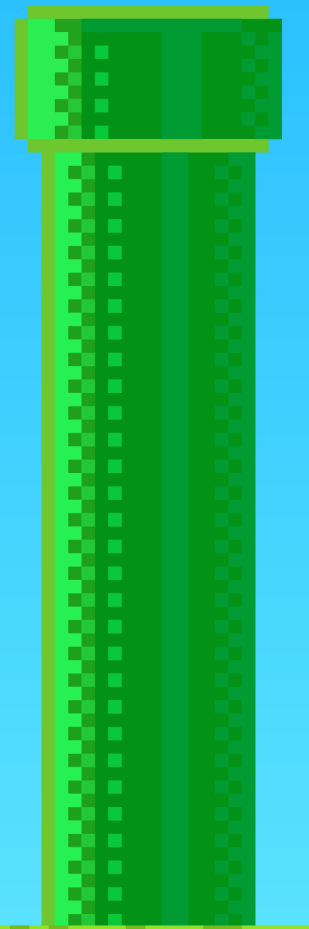
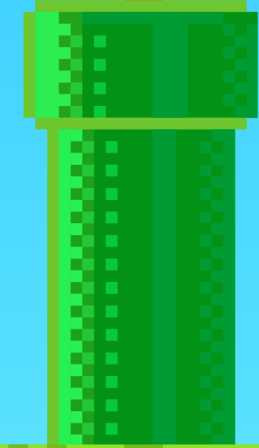
Ask A Question



Erin Boyle

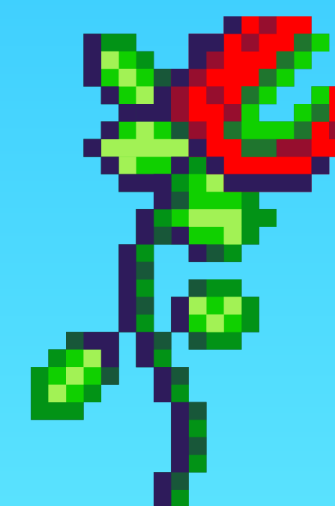
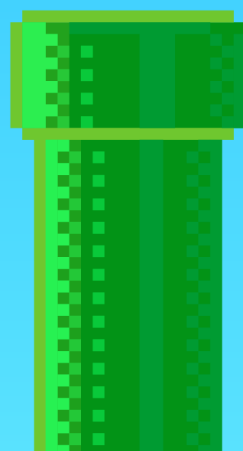
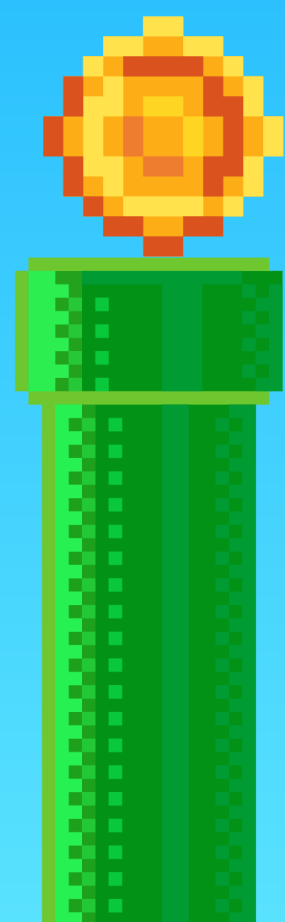
erinyafen@vt.edu

2024 NHW and Researcher Meeting Volunteer



THANKS FOR
PLAYING

END



NHERI GSC Research Subcommittee Meetings!

Group Breakout Rooms!

Breakout Rooms (30 Minutes):

1. Social Science Subcommittee (Erin Boyle):

- Discuss volunteering at the 50th Annual Natural Hazards Workshop

2. Simulation & Computational Methods Subcommittee (Bijan Sayyafzadeh and Pooria Mazaheri):

- Introduce RSR activities (10 mins)
- Presentation by Pooria Mazaheri on research and Q&A : (10 min)
 - Title: *"Risk Assessment for Transmission Lines Under Wind Extremes"*
- Discuss the next activities for the RSRs and getting familiar with the members

Presented by:

Pooria Mazaheri
Chair of Research

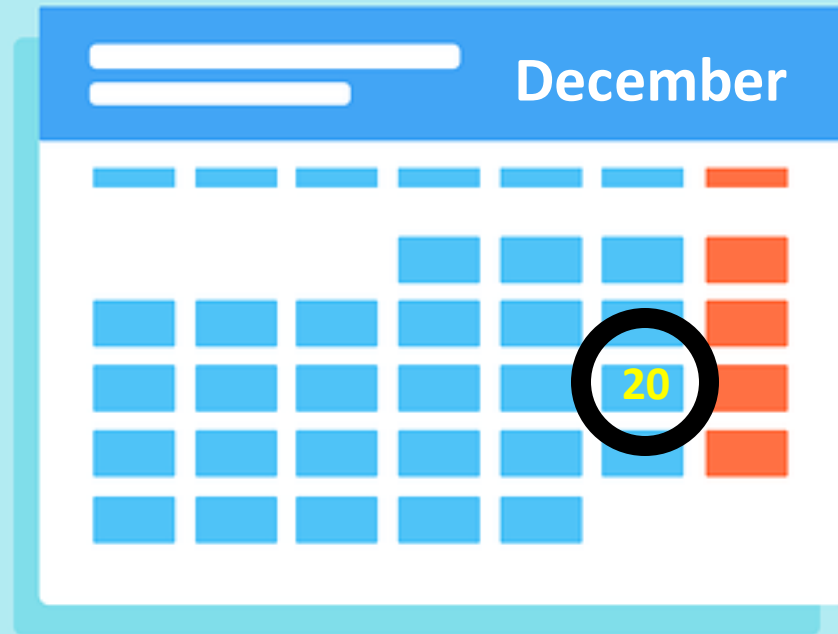
Erin Boyle
RSR of Social Science

Bijan Sayyafzadeh
RSR of Simulation &
Computational Methods



Future Meeting Dates

3rd Friday of
every month
at 11:00am
CST





The NHERI Network Coordination Office is supported by the National Science Foundation award [CMMI 2129782](#). Any statements in this material are those of the presenter(s) and do not necessarily reflect the views of the National Science Foundation.

