



**Simulation/Computational Methods  
Research Subcommittee Representative (RSR)**

Meeting Minutes  
November 15, 2024  
12:00pm CT

1. Pooria Mazaheri presented his research and answered questions about the research.
2. Collected contact information from people who were interested in this subcommittee in the excel sheet below:  
[Membership SCM SubCommittee NHERI GSC List.xlsx - Google Sheets](#)
3. Add members to Sim DesignSafe Slack channel to communicate further with the members.
4. Two topics were raised to invite people and discuss more about them:
  - OpenSees simulation which Silvia Mazzoni was the one that members were interested in.
  - "Climate resilient sustainable concrete model" topic which we need to think about someone to present.
5. Simulation/Computational Methods RSR will meet again in January.



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An Overview on

# Simulation & Computational Methods (SCM) Research Subcommittee (RS)

Bijan Sayyafzadeh  
SCM Research Subcommittee Representative (RSR)

Before We Begin:

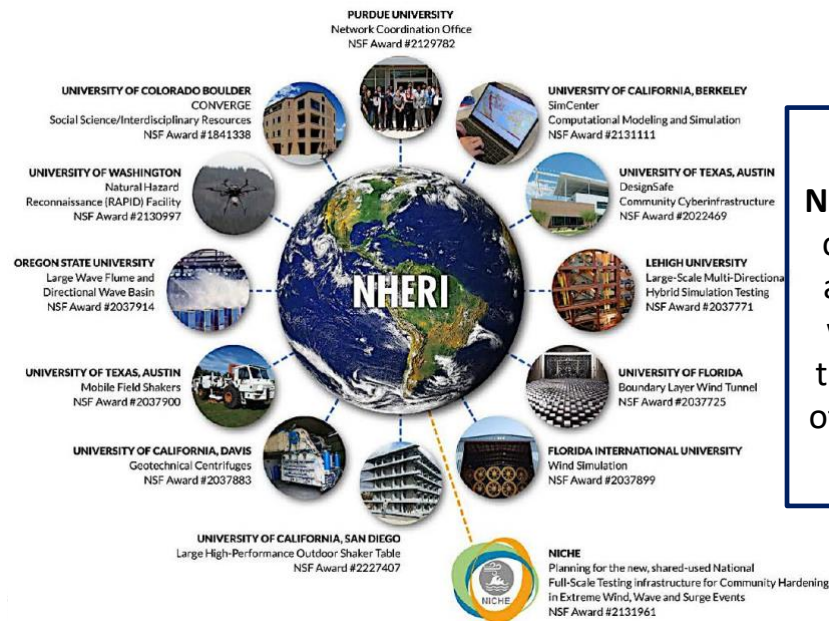
## What is the Purpose of Simulation?

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)



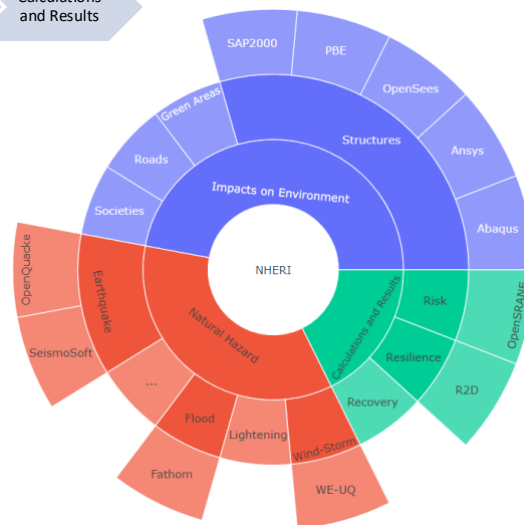
**NHERI** consist of 13 components that aid in developing ways to **mitigate** the **consequences** of natural hazards.



## 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.



**NHERI GSC**  
Graduate Student Council

**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](mailto:B.Sayyaf@yahoo.com)



**NHERI GSC**  
Graduate Student Council

# Today presentation



## Pooria Mazaheri

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

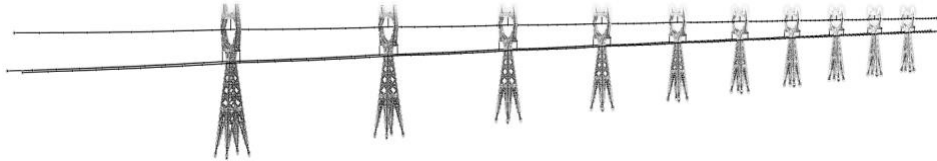


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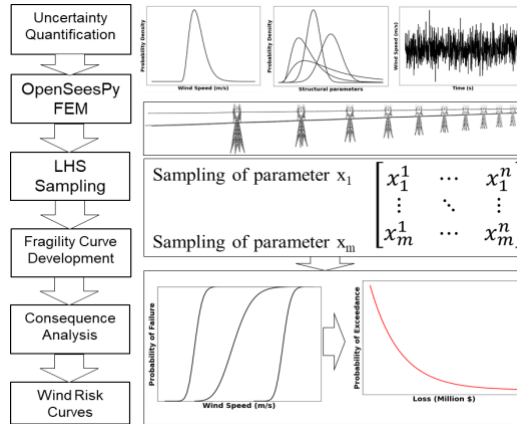
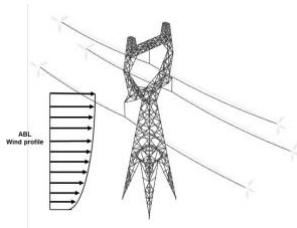
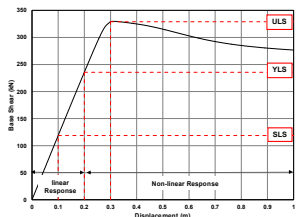
## **Risk Assessment for Transmission Lines Under Wind Extremes Considering Multiple Failure Criteria**

Pooria Mazaheri, PhD Student  
Alice Alipour, Associate Professor

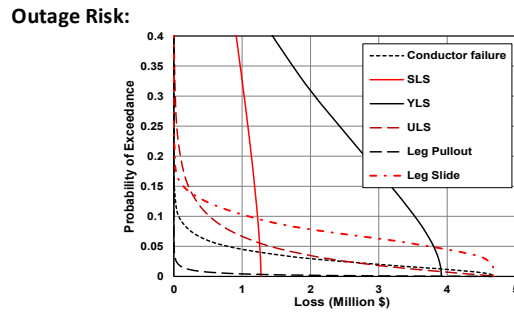
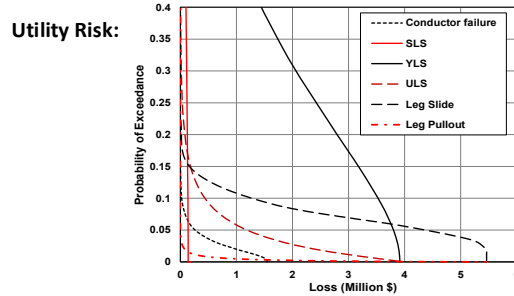
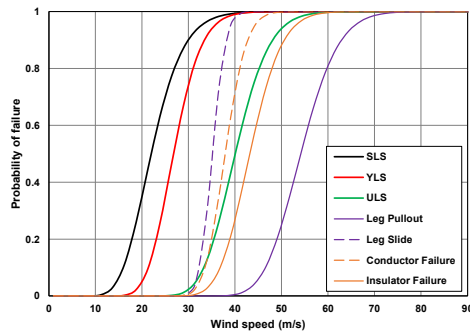
# Background & Gap



# Methods



# Research Findings & Conclusions



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



National Science Foundation

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