

# NHERI SimCenter

## VISION & COLLABORATION

Leadership Team: Sanjay Govindjee, UC Berkeley | Gregory G. Deierlein, Stanford | Satish Rao, UC Berkeley | Ahsan Kareem, Notre Dame | Laura Lowes, UW  
Management Team: Frank McKenna, UC Berkeley | Matthew Schoettler, UC Berkeley  
Software Development Team: Pedro Arduino, UW | Wael Elhaddad, UC Berkeley | Michael Gardner, UC Berkeley | Peter Mackenzie-Helnwein, UW | Nikhil Padhye, UC Berkeley | Chaofeng Wang, UC Berkeley | Adam Zsarnóczy, Stanford | Barbara Simpson, Oregon State | Peter Sempelinski, Notre Dame

### SimCenter

The Computational Modeling and Simulation Center (SimCenter) is part of the Natural Hazards Engineering Research Infrastructure (NHERI) program funded by the National Science Foundation.

Transforming the nation's ability to understand and mitigate adverse effects of natural hazards on the built environment through computational simulation.

### Vision

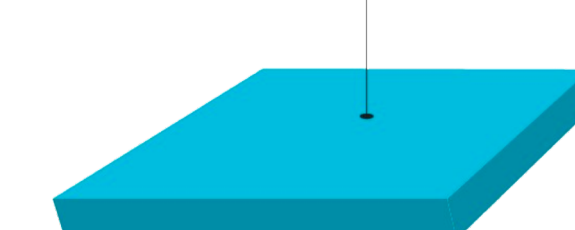
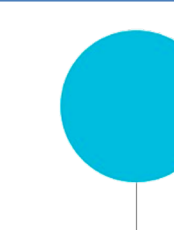


### Framework

Our **Application Framework** – a collection of software connected by standardized interfaces – is powered by HPC and supplemented by UQ and AI to meet our vision. This framework allows us to build flexible and extensible scientific applications that can perform Regional Hazard Simulations or build standalone research tools.



### Missions



Develop a **computational framework** that supports decision-making to enhance community resilience to natural hazards.



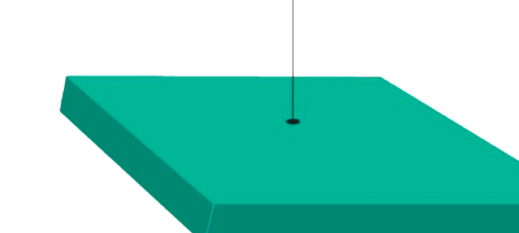
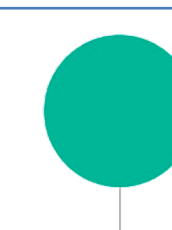
Design the **framework** to be sufficiently **flexible, extensible, and scalable**.



Seed the **framework** with **connectivity to existing simulation tools and data** so it can be readily reused.



Release **tools built using this framework** that meet the needs of researchers in natural hazards engineering.



Provide an **ecosystem** that fosters collaboration between people who seek to improve community resilience to natural hazards.

### Products

The SimCenter provides software to streamline natural hazards engineering research in a cyber-infrastructure framework that allows collaborative simulations from various disciplines to be integrated while accounting for pertinent sources of uncertainty.



### The SimCenter Community



General collaborations and questions: Contact us at [nheri-simcenter@berkeley.edu](mailto:nheri-simcenter@berkeley.edu)  
Join our conversations on Slack.

Developer in residency: SimCenter provides working spaces and technical supports for collaborating developers.

Improve the Application Framework: Contribute your data, models and software.

Student training: Summer bootcamp, Summer tool training, REU program.

Letters of support: Request letters of support from PI Sanjay Govindjee.



# SimCenter

Center for Computational Modeling and Simulation



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