A Research Coordination Network (RCN):

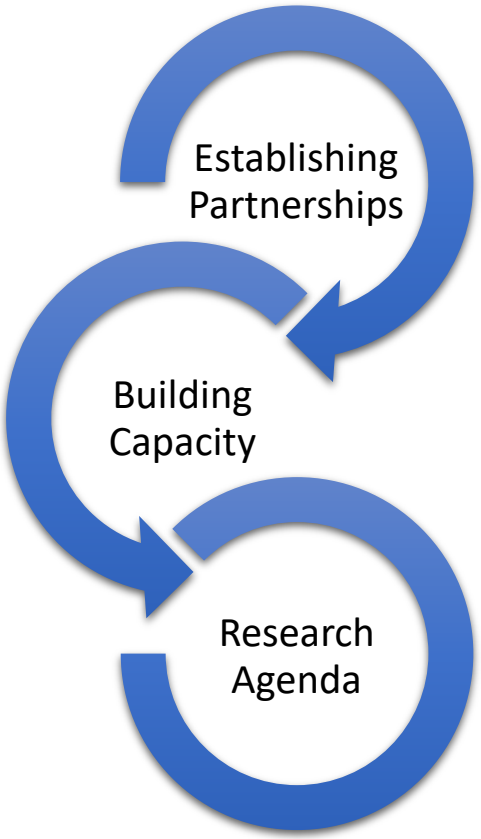
Multi-hazard Engineering Collaboratory in Hybrid Simulation

This research coordination network aims to facilitate the scientific advances needed to establish the theory of and expand the capacity for hybrid simulation as it applies to multi-hazard engineering.

The objectives are to:

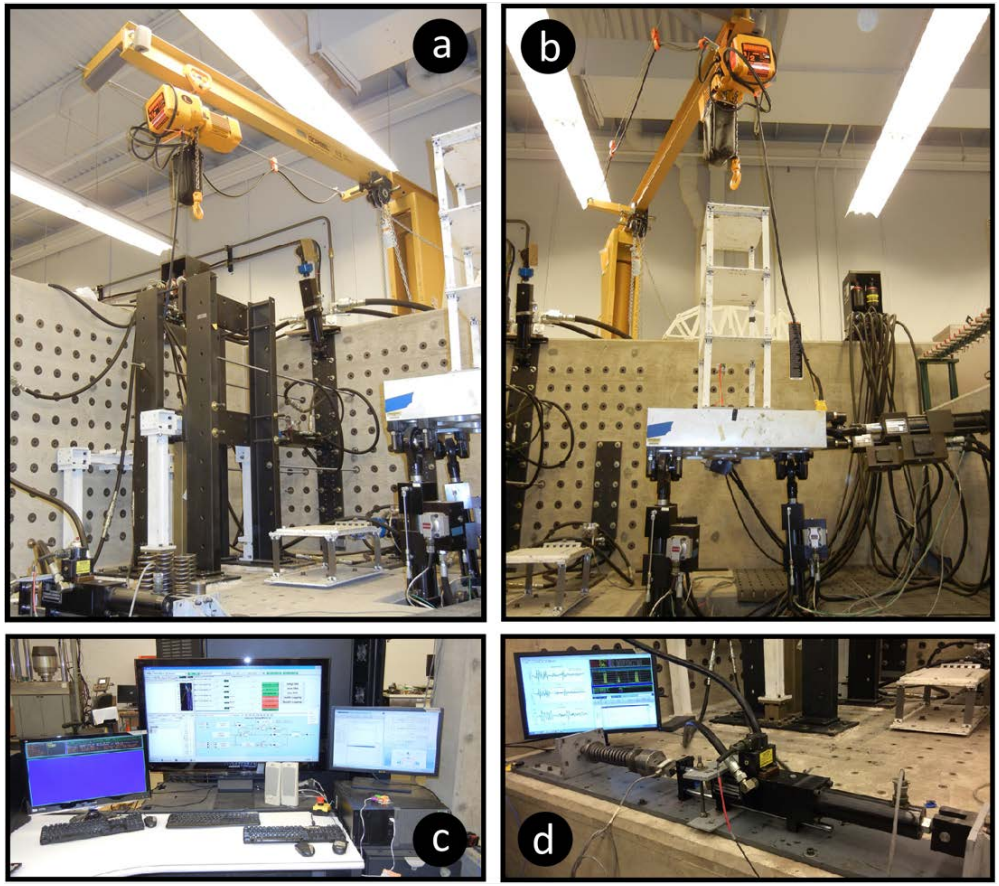
- Diversify the community of researchers
- Build capacity in existing laboratories
- Develop research agenda for hybrid simulation
- Foster peer-to-peer and institute-to-institute partnerships
- Share digital artifacts
- Cultivate international collaborations

More information will be posted under "NHERI Community" at designsafe in the coming weeks.



Shirley Dyke, Purdue University, USA (sdyke@purdue.edu)

RTHS Research in the Intelligent Infrastructure Systems Lab



a configurable testing area for real-time hybrid simulation

b 6DOF shake table adjacent to mounting system

c versatile control dashboard

d load frame for controller verification and characterization

Research directions include:

- **Educate** students about promising innovations in testing methods
- Enabling real-time hybrid simulation through high fidelity **modeling** and identification
- Establishing methods to **configure a successful test** with predictive indicators
- Building computational tools for **parallel, real-time execution** of large models
- Developing **self-tuning robust control** methods to deal with highly uncertain physical specimens
- **Sharing data** and tools with the community of researchers

Shirley Dyke, Purdue University, USA (sdyke@purdue.edu)