

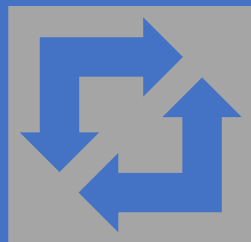
A Research Coordination Network (RCN):
Multi-hazard Engineering
Collaboratory in Hybrid Simulation

Breaking Barriers & Building Capacity

1st Workshop, December 12-13, 2017
Univ. California, San Diego

Supported by the
US National Science Foundation

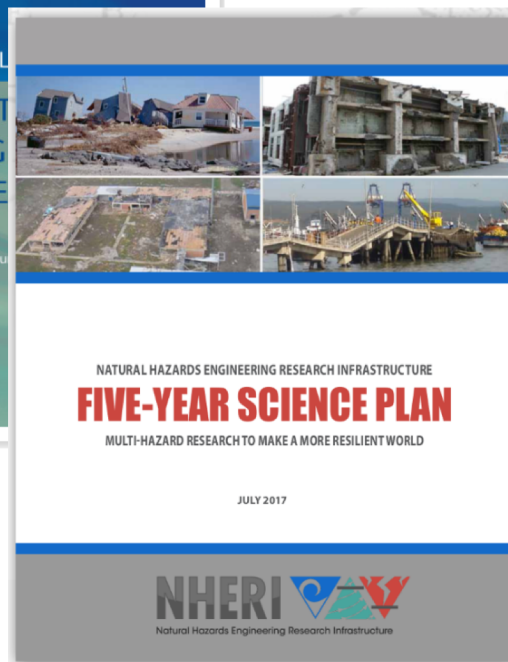


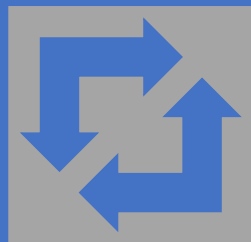


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This research coordination network aims to facilitate the scientific advances needed to establish the theory of and expand the capacity for hybrid simulation as it applies to multi-hazard engineering.





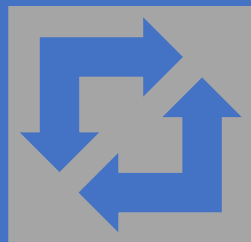
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Help
Control
Lessons
Benchmark
earthquake
tsunami
coastal
Uncertainty
Learning
Actuators
Testbed
Simulation
Multihazard
Workflow
wind
Action
Advise
Computation

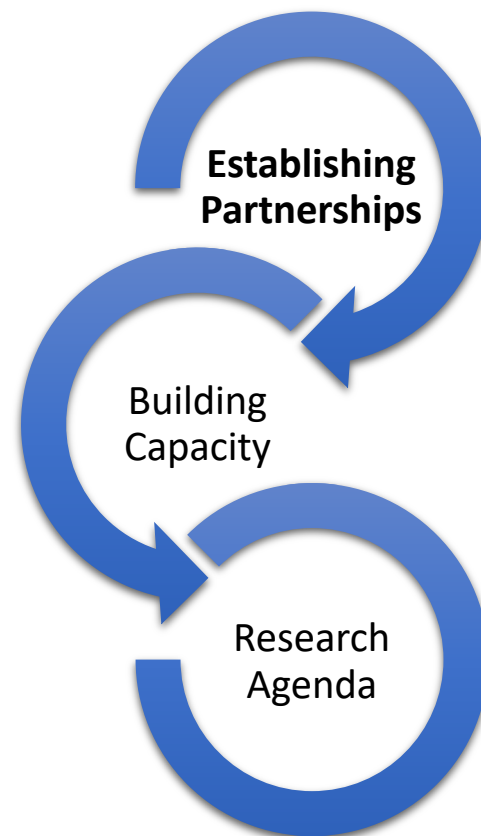




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MULTIHAZARD ENGINEERING COLLABORATORY ON HYBRID SIMULATION

A RESEARCH COORDINATION NETWORK



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MECHS OVERVIEW

Hybrid Simulation is a cyber-physical technique used to examine the behavior of structural systems that may be too large or complex to test in the laboratory. Physical specimens are linked with computational models. A challenge is to ensure that this combined system is tested under realistic conditions. Thus, boundary conditions at the interface between the physical and computational portions must be enforced, and hydraulic actuators are frequently used (see figure below).

AIM: The MECHS 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 main objectives are to:

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

