

Introduction to NHERI Lehigh Experimental Facility Staff and Website

Chad Kusko, PhD
Operations Manager
NHERI Lehigh EF

Overview

- NHERI Lehigh EF Staff Organization
- Summary of NHERI Lehigh EF and ATLSS Center Relationship
- Introduction to Website

NHERI Lehigh EF Team



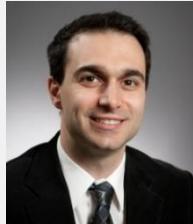
James Ricles, PI



Richard Sause, Co-PI



Chad Kusko
Operations Mgr



Thomas Marullo
IT Systems Mgr



Darrick Fritchman
ATLSS Lab Mgr



Chinmoy Kolay
Research Eng



Peter Bryan
ATLSS IT Support



Doris Oravec
ATLSS Finance Mgr

Capacity Building Partners



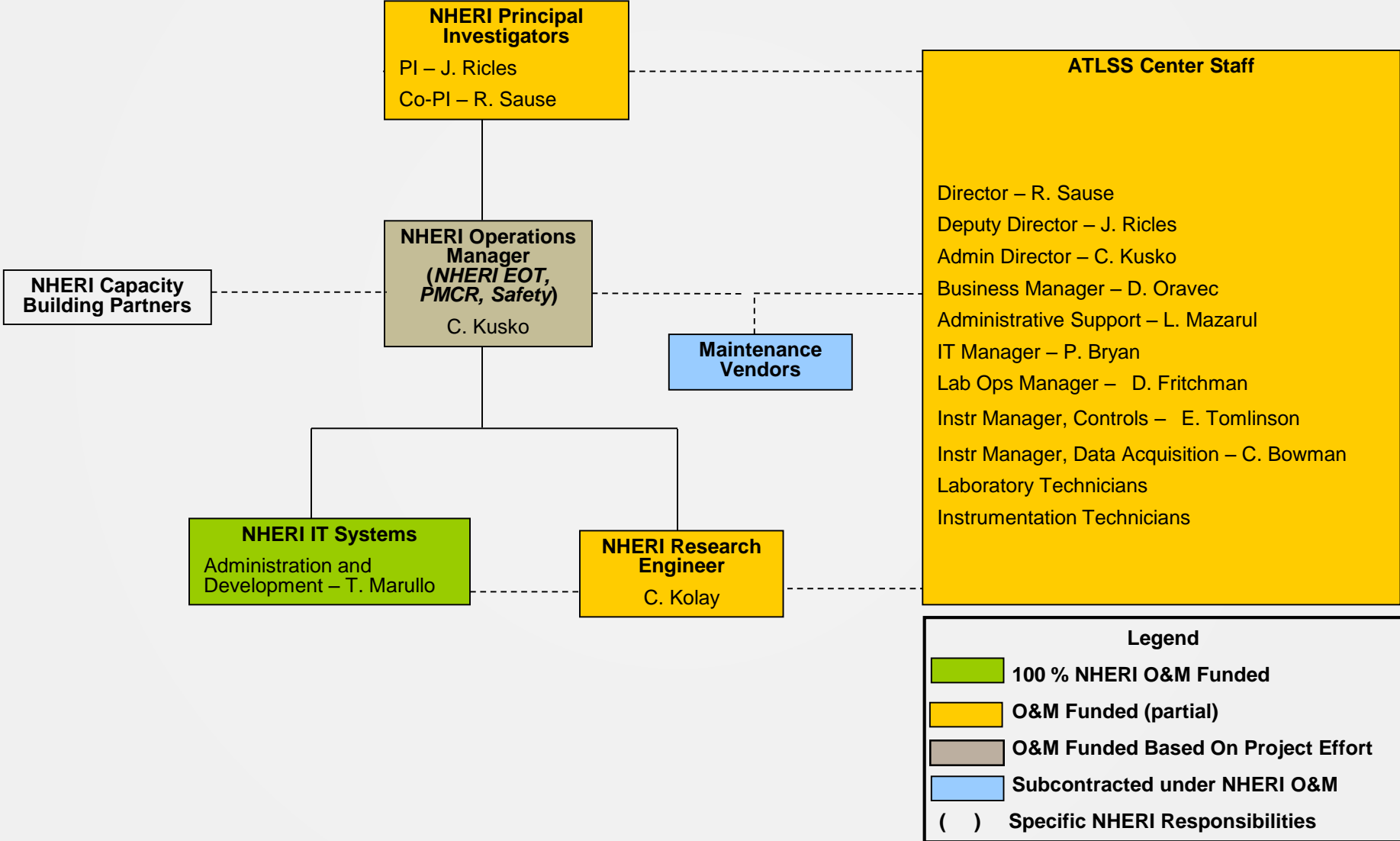
Shamim Pakzad
Adv. Sensors, Structural Monitoring



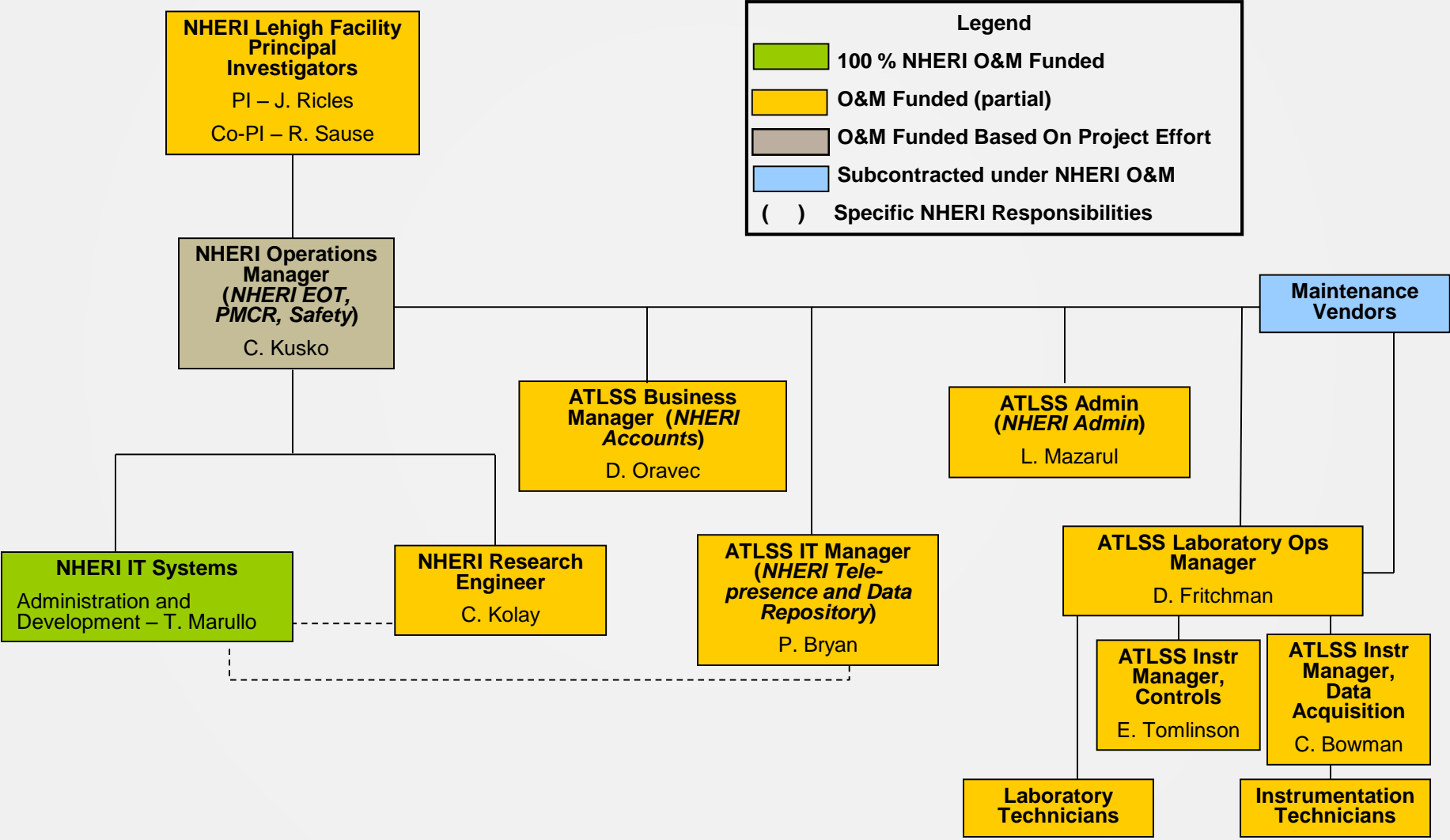
Muhannad Suleiman
Soil-Structure Interaction



NHERI Lehigh Experimental Facility Staff Organization

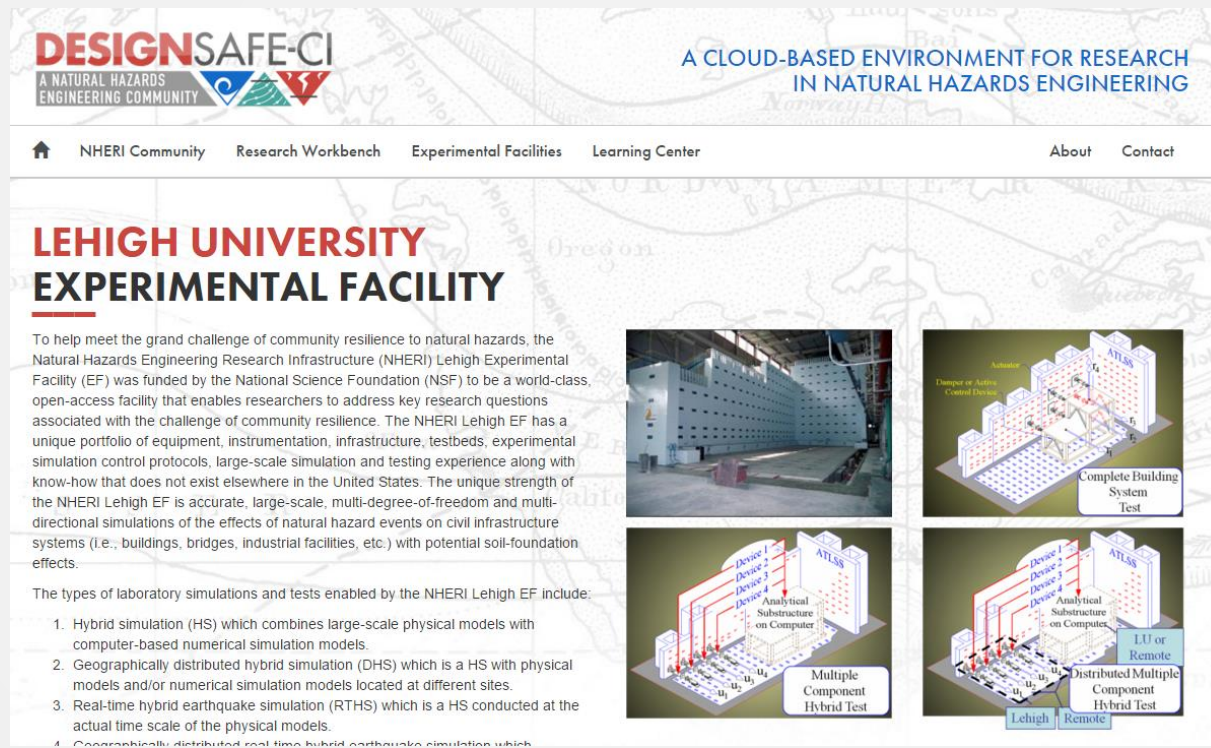


ATLSS Staff Interface with NHERI Lehigh Experimental Facility



Introduction to Website

- NHERI Lehigh website:
 - <https://www.designsafe-ci.org/lehigh>



DESIGNSAFE-CI
A NATURAL HAZARDS ENGINEERING COMMUNITY

A CLOUD-BASED ENVIRONMENT FOR RESEARCH
IN NATURAL HAZARDS ENGINEERING

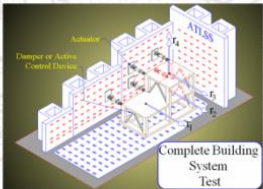
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LEHIGH UNIVERSITY EXPERIMENTAL FACILITY

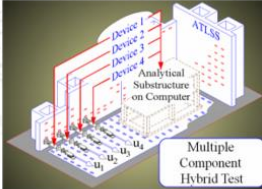
To help meet the grand challenge of community resilience to natural hazards, the Natural Hazards Engineering Research Infrastructure (NHERI) Lehigh Experimental Facility (EF) was funded by the National Science Foundation (NSF) to be a world-class, open-access facility that enables researchers to address key research questions associated with the challenge of community resilience. The NHERI Lehigh EF has a unique portfolio of equipment, instrumentation, infrastructure, testbeds, experimental simulation control protocols, large-scale simulation and testing experience along with know-how that does not exist elsewhere in the United States. The unique strength of the NHERI Lehigh EF is accurate, large-scale, multi-degree-of-freedom and multi-directional simulations of the effects of natural hazard events on civil infrastructure systems (i.e., buildings, bridges, industrial facilities, etc.) with potential soil-foundation effects.

The types of laboratory simulations and tests enabled by the NHERI Lehigh EF include:

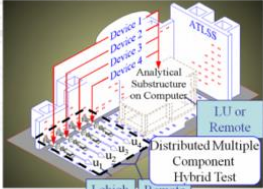
1. Hybrid simulation (HS) which combines large-scale physical models with computer-based numerical simulation models.
2. Geographically distributed hybrid simulation (DHS) which is a HS with physical models and/or numerical simulation models located at different sites.
3. Real-time hybrid earthquake simulation (RTHS) which is a HS conducted at the actual time scale of the physical models.
4. Geographically distributed real-time hybrid earthquake simulation which



Complete Building System Test



Multiple Component Hybrid Test



Distributed Multiple Component Hybrid Test
Lehigh Remote