

# An International Workshop to Develop Research Campaigns, Interdisciplinary Teams and Disruptive Technologies for the NHERI 5- Year Science Plan for Natural Hazards

18 March 2019

- 8:00 Welcome and Opening Remarks – **Dr. Joy Pauschke (NSF)**
- 8:15 Objectives of the Meeting – **Julio Ramirez**, Karl H. Kettelhut Professor in Civil Engineering and NHERI-NCO Center Director, and **Billy L. Edge**, P.E., Ph.D., Dist.M. ASCE, Professor Civil, Construction, and Environmental Engineering, North Carolina State University
- 8:30 Summary of NHERI 5-Year Science Plan and Social Science View – **Lori Peek**, Professor, Department of Sociology, Director, Natural Hazards Center, University of Colorado Boulder
- 8:50 Expanding the vision of science and engineering for the Natural Hazards Community, **Timothy M. Persons**, PhD, SES, Chief Scientist of the United States Government Accountability Office (GAO)
- 9:30 Break (coffee and refreshments)
- 9:45 Panel – A vision for future hazard mitigation/disruptive technologies not addressed in the NHERI Science Plan  
**Stephanie Paal**, PhD, Asst. Prof, Texas A&M University  
**Mike Gomez**, PhD, Asst. Prof, University of Washington  
**Simone Marras**, PhD, Asst. Prof, New Jersey Institute of Technology  
**Ali Mostafavi**, PhD, Asst. Prof, Texas A&M University  
**Reilly Allison**, PhD, Asst. Prof, University of Maryland  
**Will Srubar**, PhD, Asst. Prof, University of Colorado Boulder
- 10:45 Leveraging NSF ERC Funding with NHERI Facilities, **Edward Kavazanjian, Jr.**, PhD, Regents' professor and Director of Center for Bio-mediated and Bio-inspired Geotechnics, Arizona State University
- Science of Team Science - best practices and future directions for interdisciplinary teams, **Edward T. Palazzolo**, PhD, Army Research Office, Program Manager for Social and Cognitive Networks
- Patience and stewardship over generations: LIGO's detector facilities and recent discoveries, **Joseph A. Giaime**, PhD, Professor of Physics & Astronomy (LSU), Observatory Head, LIGO Livingston, Caltech
- 12:15 **Lunch (on your own)**
- 13:00 Expectation and Organization of Afternoon Breakout Sessions A-F
- 13:15 **Breakout Sessions – I**  
a) Advanced computational methods and high-performance and real-time computing, **Chris Gill**, DSc, Washington University, St. Louis

b) Data-driven science, **Lori Peek**, PhD, University of Colorado Boulder, **Maria Dillard**, PhD, NIST, **Elaina Sutley**, PhD, University of Kansas

c) Robotics - Mobile Manipulation in Uncertain Environments, **Kyle D. Edelberg**, NASA's Jet Propulsion Lab

14:30 **Break (coffee and refreshments)**

14:45 **Breakout Sessions – I (Continued)**

d) Bio-inspired design, **Jerome P. Lynch**, PhD, University of Michigan

e) Additive manufacturing, **Zhijian Pei**, PhD, Texas A&M University

f) Advanced materials, **Pablo Zavattieri**, PhD, Purdue University

16:00 **Break**

16:15 **Report- Results of Breakout Sessions – I**

**Expectation and Organization of Day 2**

17:15

**Adjourn**

17:30

## 19 March 2019

8:00 **Breakout Sessions – II** – Examples of Research Campaigns: Operation of research campaign – team selection & coordination, implementation, and best practices

**Example 1:** Earthquake and Tsunami Hazards and related landslides – scope, using NHERI facilities, community engagement, metrics for success

**Example 2:** Windstorm Hazards– scope, using NHERI facilities, community engagement, metrics for success

**Example 3:** Storm Surge in Coastal Areas– scope, using NHERI facilities, community engagement, metrics for success

(Examples will be defined by the Workshop Organizing Committee and distributed before the Workshop. Each session will be facilitated by a member of the Committee.)

10:15 **Break (coffee and refreshments)**

10:30 **Report- Results of Breakout Sessions – II**

11:30 Frontiers of Hazard Risk Mitigation, **Thomas Denis O'Rourke**, PhD, PE, NAE, Thomas R. Briggs Professor of Engineering in the School of Civil and Environmental Engineering, Cornell University

13:00 **Adjourn**