Using NHERI and Extreme Events Reconnaissance / Research Networks

CONVERGE Leadership Corps

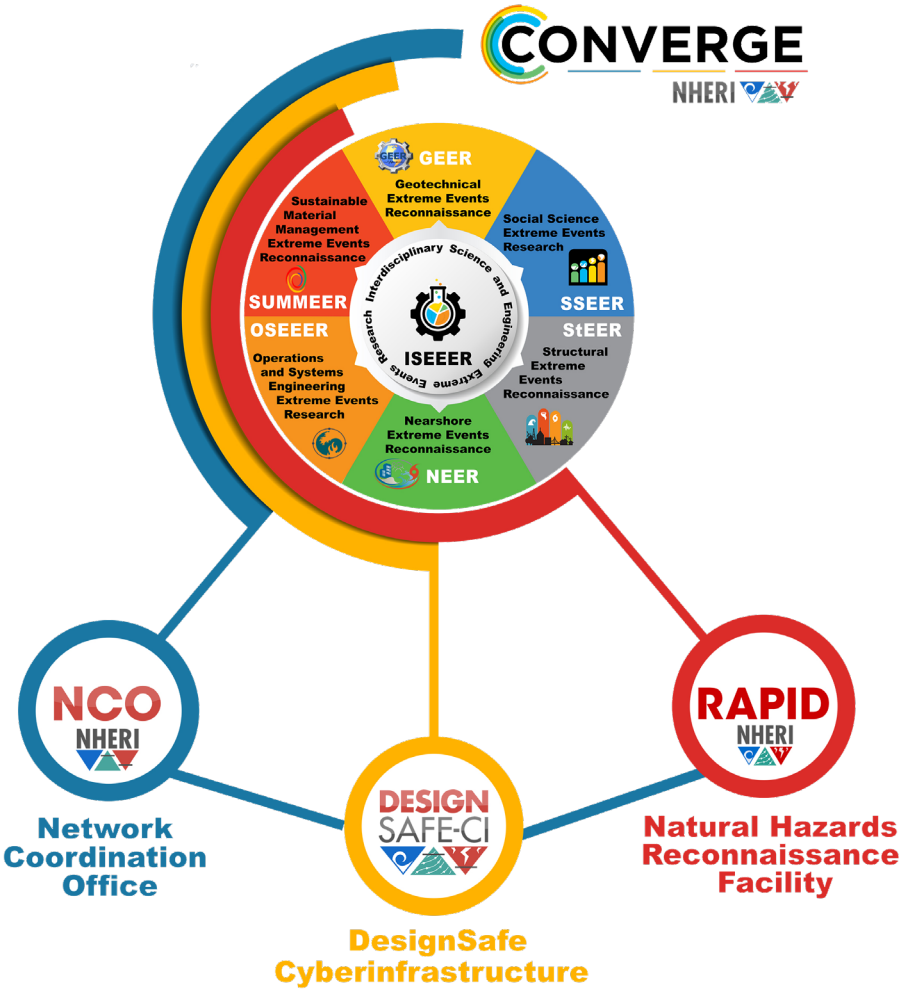
converge.colorado.edu/research-networks/leadership-corps

CONVERGE Leadership Corps

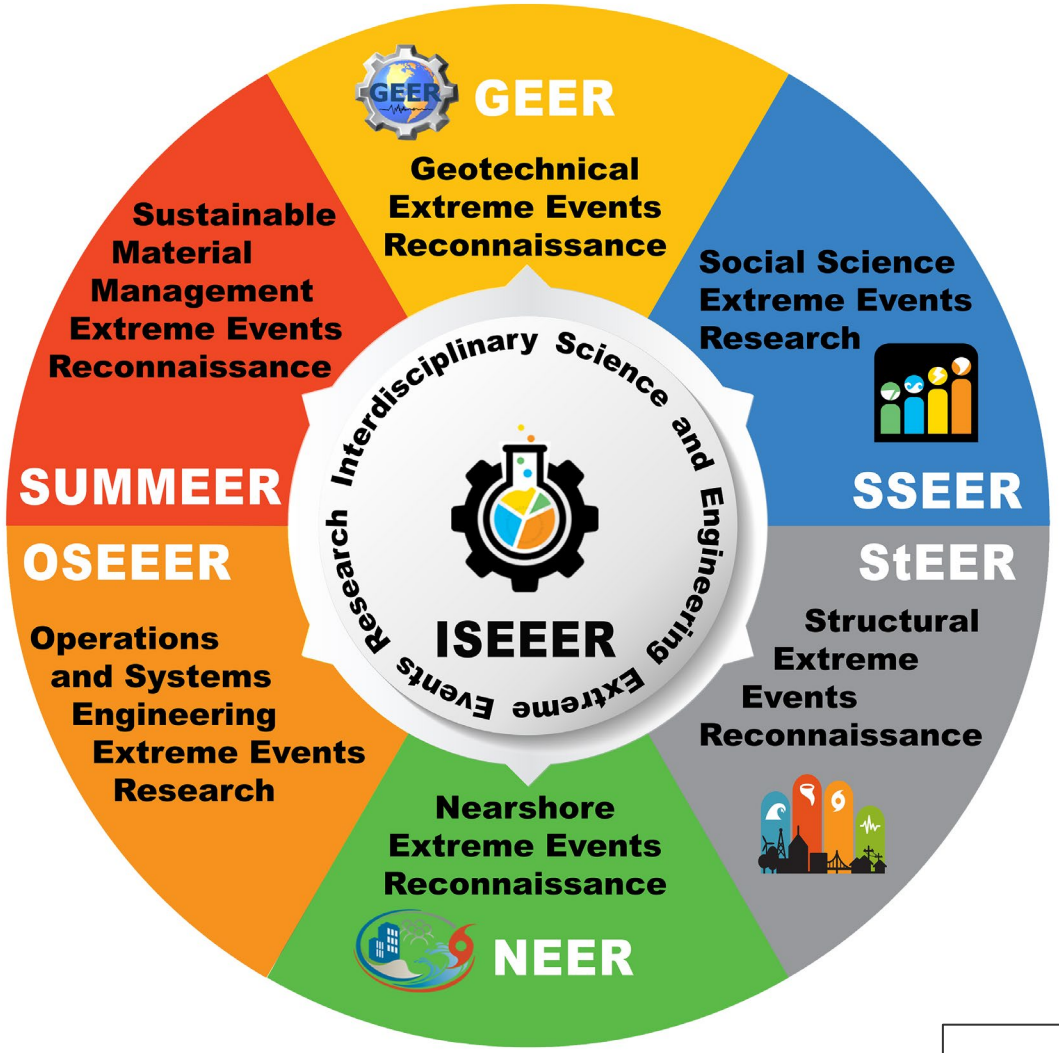
Established: 2019

The **Leadership Corps** brings together the principal investigators for the NSF-funded **Extreme Events Reconnaissance and Research (EER) networks** and the NSF-funded **NHERI components** that support extreme events research.

Article:
https://www.frontiersin.org/articles/10.3389/fbuil.2020.00110/full



Extreme Events Reconnaissance / Research (EER) Networks



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NSF Award #1841338

CONVERGE

CONVERGE is a National Science Foundation-Natural Hazards Engineering Research Infrastructure (NSF-NHERI) facility dedicated to:

- ***identifying*** researchers;
- ***educating*** and ***training*** researchers;
- ***setting*** a convergence research agenda that is problem-focused and solutions-based;
- ***connecting*** researchers and ***coordinating*** functionally and demographically diverse research teams; and
- ***supporting*** and ***funding*** convergence research, data collection, data sharing, and solutions implementation.

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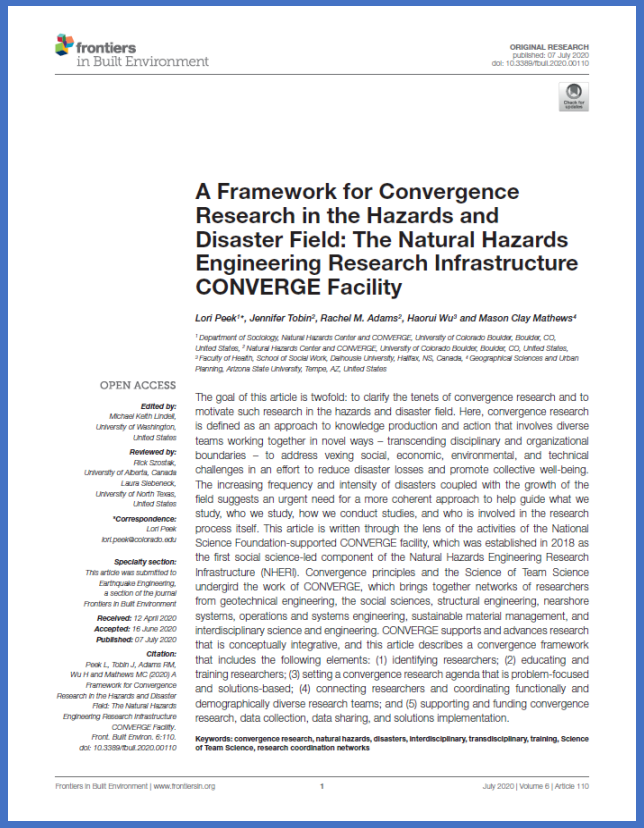

frontiers in Built Environment

ORIGINAL RESEARCH
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A Framework for Convergence Research in the Hazards and Disaster Field: The Natural Hazards Engineering Research Infrastructure CONVERGE Facility

Lori Peek[1], Jennifer Tobin[2], Rachel M. Adams[3], Haorui Wu[3] and Mason Clay Mathews[4]*

[1] Department of Sociology, Natural Hazards Center and CONVERGE, University of Colorado Boulder, Boulder, CO, United States, [2] Natural Hazards Center and CONVERGE, University of Colorado Boulder, Boulder, CO, United States, [3] Faculty of Health, School of Social Work, Dalhousie University, Halifax, NS, Canada, [4] Geographical Sciences and Urban Planning, Arizona State University, Tempe, AZ, United States

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Edited by:
Michael Keith Lindell,
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United States

Reviewed by:
Rick Szostak,
University of Alberta, Canada
Laura Siebeneck,
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United States

***Correspondence:**
Lori Peek
lori.peek@colorado.edu

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The goal of this article is twofold: to clarify the tenets of convergence research and to motivate such research in the hazards and disaster field. Here, convergence research is defined as an approach to knowledge production and action that involves diverse teams working together in novel ways – transcending disciplinary and organizational boundaries – to address vexing social, economic, environmental, and technical challenges in an effort to reduce disaster losses and promote collective well-being. The increasing frequency and intensity of disasters coupled with the growth of the field suggests an urgent need for a more coherent approach to help guide what we study, who we study, how we conduct studies, and who is involved in the research process itself. This article is written through the lens of the activities of the National Science Foundation-supported CONVERGE facility, which was established in 2018 as the first social science-led component of the Natural Hazards Engineering Research Infrastructure (NHERI). Convergence principles and the Science of Team Science undergird the work of CONVERGE, which brings together networks of researchers from geotechnical engineering, the social sciences, structural engineering, nearshore systems, operations and systems engineering, sustainable material management, and interdisciplinary science and engineering. CONVERGE supports and advances research that is conceptually integrative, and this article describes a convergence framework that includes the following elements: (1) identifying researchers; (2) educating and training researchers; (3) setting a convergence research agenda that is problem-focused and solutions-based; (4) connecting researchers and coordinating functionally and demographically diverse research teams; and (5) supporting and funding convergence research, data collection, data sharing, and solutions implementation.

Keywords: convergence research, natural hazards, disasters, interdisciplinary, transdisciplinary, training, Science of Team Science, research coordination networks

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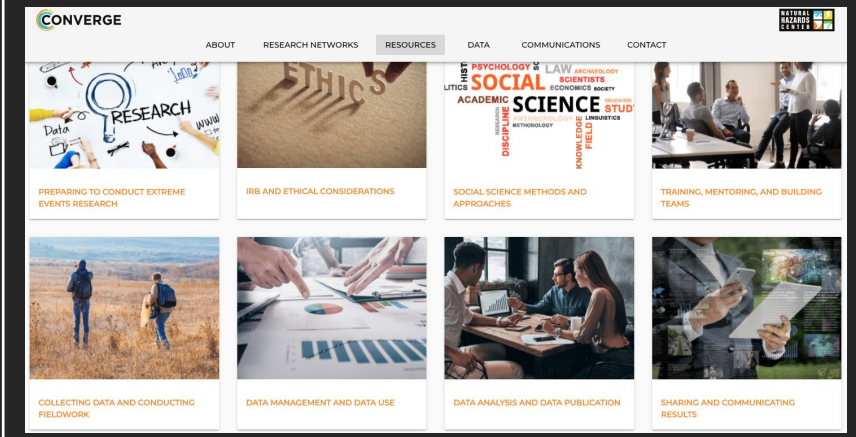
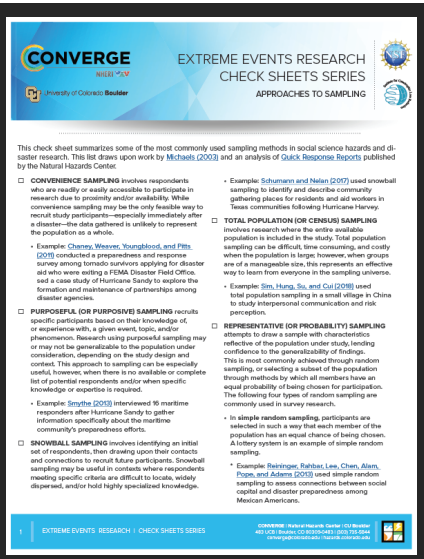
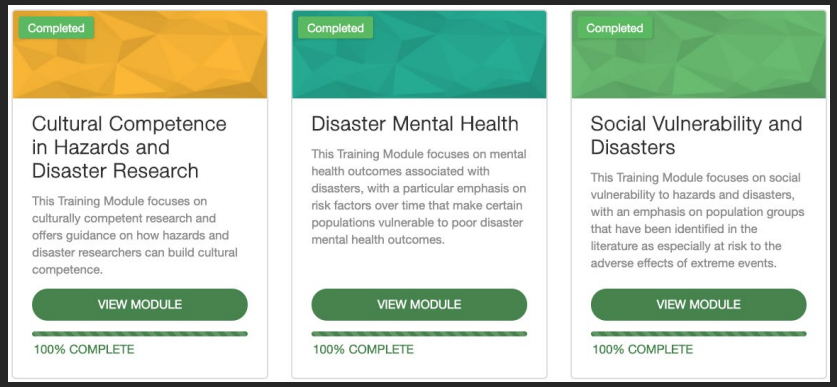
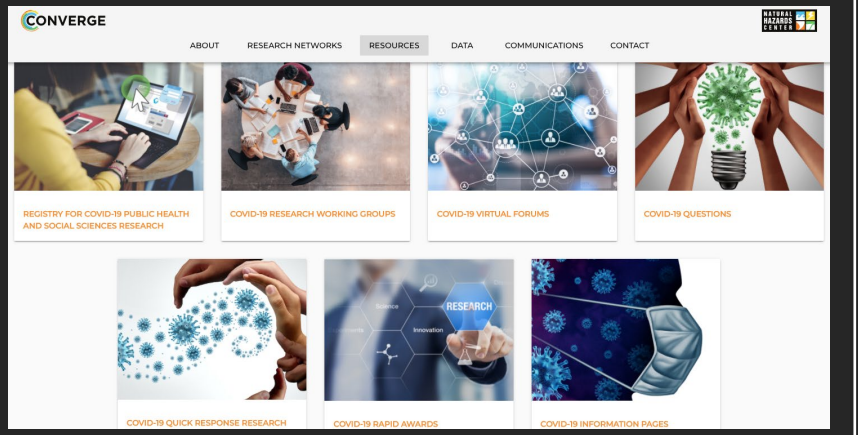
Train and Mentor a Diverse Next Generation





CONVERGE
NHERI





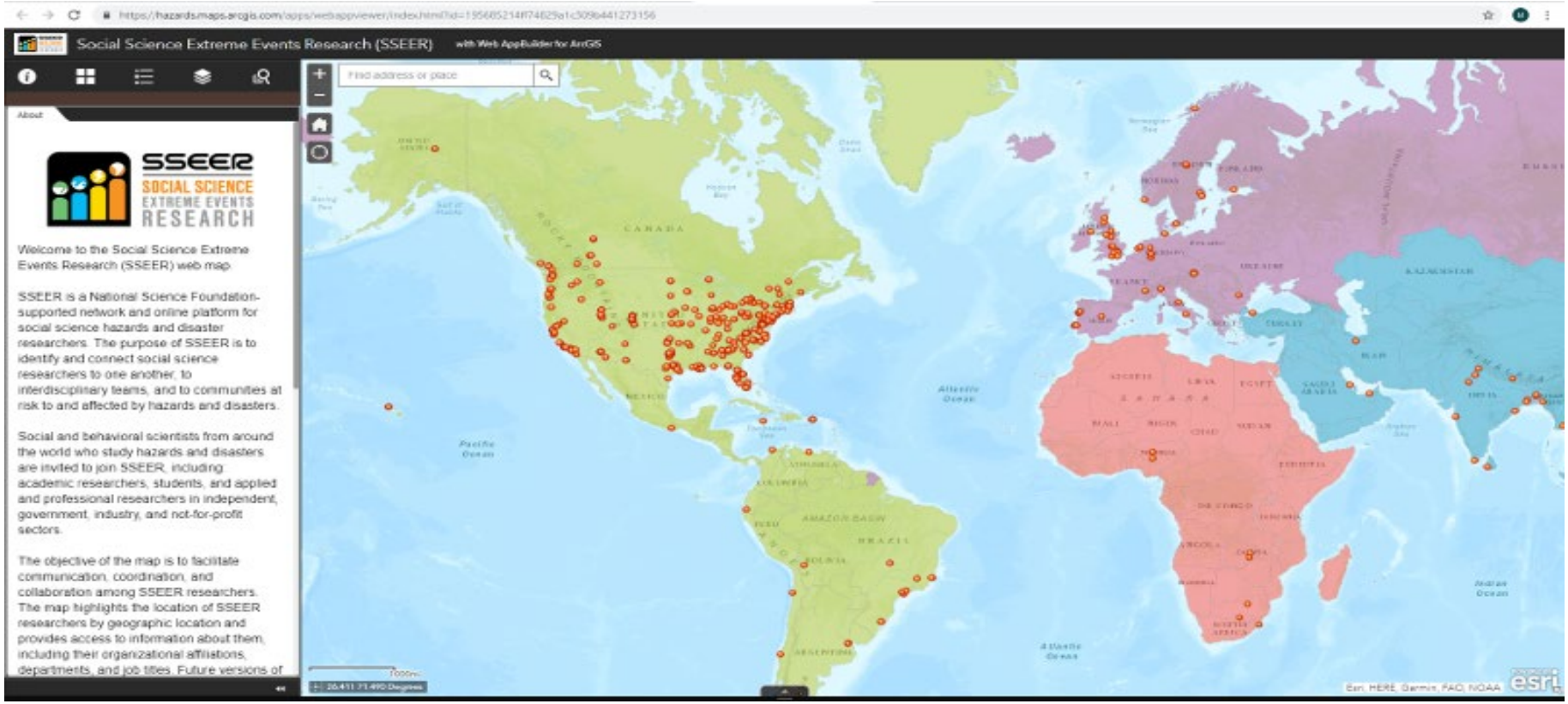
https://converge.colorado.edu/signup

Social Science Extreme Events Research

Year Established	2017
Member Profile	Social and Behavioral Scientists and Others in Allied Disciplines Concerned with the Human Consequences Disasters
Current Membership	1,227
Primary Hazards	Natural, Technological, Terrorism and Willful Violence, Pandemics
Major Contributions	First Census of Social Scientists, Mobilization of the Social Science Community through Virtual Forums, COVID-19 Working Groups
Data Types	Qualitative, Quantitative, Mixed Methods
Website	converge.colorado.edu/research-networks/sseer

NSF Awards #1745611, #1841338

Lori Peek, PI



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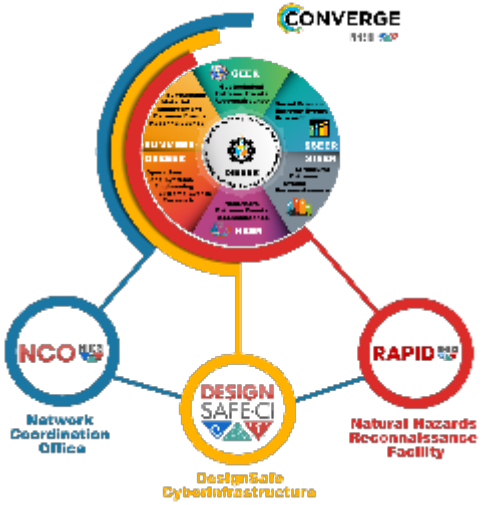
SSEER
SOCIAL SCIENCE
EXTREME EVENTS
RESEARCH

SSEER Activities

1. Annual Census and Interactive Map of Social and Behavioral Scientists
2. Virtual Forums
3. Training and Mentoring Activities
4. COVID-19 Working Groups Research Agendas
5. Global Research Registry
6. Social Science Data Ambassadors

Leadership Corps Accomplishments

Best Practices



Communications

CONVERGE Leadership Corps

Internal Operations Manual

I. What is the purpose of this document?

This document was developed to clarify the structure, membership, scope, and purpose of the CONVERGE Leadership Corps.

II. Who is the audience?

This document is intended to be read and used by current and future members of the CONVERGE Leadership Corps. This document will also be made available to our NSF Program Directors.

III. What are the things we should all know and be clear on when we are speaking about the CONVERGE Leadership Corps?

1. What is CONVERGE?

CONVERGE is a National Science Foundation-Natural Hazards Engineering Research Infrastructure (NSF-NHERI) facility. The mission of CONVERGE is to

- ✓ *identify and coordinate* social science and engineering researchers and interdisciplinary research teams before, during, and after disaster;
- ✓ *advance* the ethical conduct and scientific rigor of rapid response disaster research;
- ✓ *support* the training and mentoring of a diverse next generation of hazards and disaster researchers;
- ✓ *fund* virtual reconnaissance, field research, and the development of novel research instruments and data collection protocols;
- ✓ *accelerate* the development of mobile applications for hazards and disaster research through a partnership with NSF-NHERI RAPID;

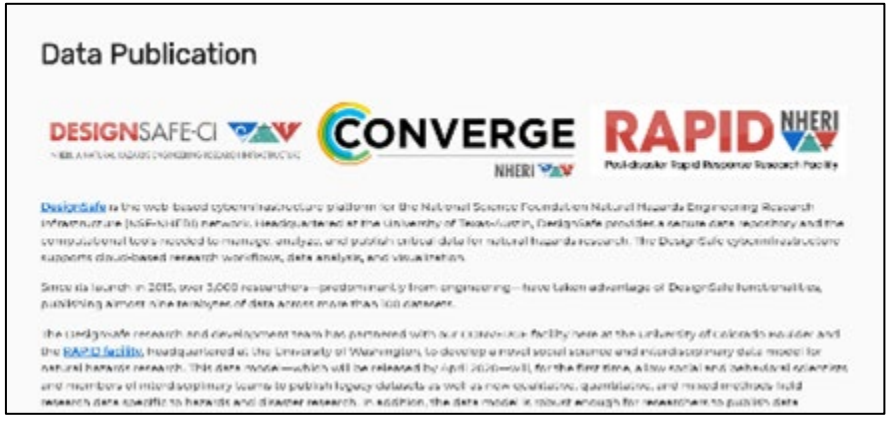
Data Collection

Training and Mentoring

SOCIAL VULNERABILITY AND DISASTERS

DISASTER MENTAL HEALTH

Data Publication



CONVERGE Leadership Corps

For the first time, academic hazards-focused, disciplinary and interdisciplinary communities are working together on a large scale to advance:

- research coordination
- ethical best practices
- scientific agenda setting
- systematic data collection
- data sharing and publication

Thank you!

Comments, Information Sharing, Questions?