



**NATURAL  
HAZARDS  
CENTER**



*We envision a just and equitable world where knowledge is applied to ensure that humans live in harmony with nature.*

# **CONVERGE**

## **Extreme Events Research Training Modules Workshop**

Tuesday March 3, 2020  
9:00 a.m.-Noon



University of Colorado **Boulder**

NSF Award #1841338



NHERI 

# Today's Schedule

1. Introduction & demonstration of CONVERGE Training Modules (1 hour)
2. Q & A and feedback discussion with participants (15 min)
3. Break (15 min)
4. Completion of the CONVERGE Cultural Competence Competence Training Module (1 hour)
5. Q & A and feedback discussion with participants (15 min)
6. Training evaluation (15 min)

# Presenters



**Rachel Adams, PhD, MPH**  
Postdoctoral Research Associate  
Natural Hazards Center and CONVERGE  
University of Colorado Boulder



**Haorui Wu, PhD**  
Assistant Professor  
School of Social Work  
Dalhousie University



# Acknowledgements

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# Natural Hazards Engineering Research Infrastructure (NHERI)

## CONVERGE

*Coordinated, ethical, scientifically rigorous  
interdisciplinary extreme events research*



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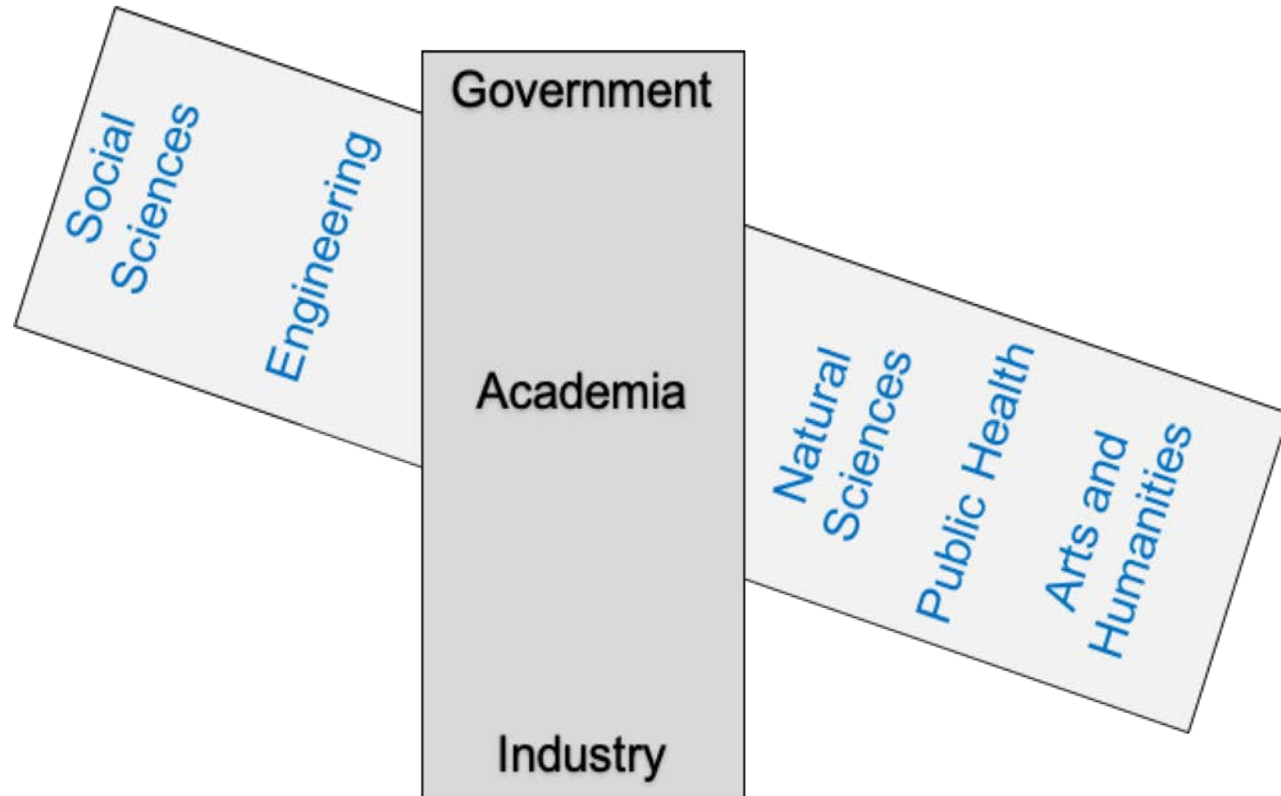
NHERI 



# Convergence builds upon principles of interdisciplinary research and relies on webs of partnerships

## Why convergence science?

- Start with a complex problem that *requires* interdisciplinary collaboration
- Work toward applications and solutions



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NHERI 



**CONVERGE** is an NSF-Natural Hazards Engineering Research Infrastructure (NHERI) facility dedicated to:

1. **identifying** and **coordinating** researchers and research teams
2. **supporting** and **accelerating** training and mentoring to advance the ethical conduct and scientific rigor of hazards and disaster research
3. **funding** virtual reconnaissance, field research, and the development of novel research instruments and data collection protocols
4. **encouraging** the publication of data and data collection instruments and protocols (DesignSafe Cyberinfrastructure + CONVERGE)
5. **accelerating** the development of mobile applications for social science and interdisciplinary field data collection (RAPID + CONVERGE)

[converge.colorado.edu](http://converge.colorado.edu)



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# NSF Extreme Events Reconnaissance / Research (EER) Networks

1. Geotechnical Engineering (GEER)
2. Social Sciences (SSEER)
3. Structural Engineering (StEER)
4. Nearshore Systems (NEER)
5. Operations and Systems Engineering (OSEEER)
6. Sustainable Material Management Engineering (SUMMEER)
7. Interdisciplinary Science and Engineering (ISEEER)

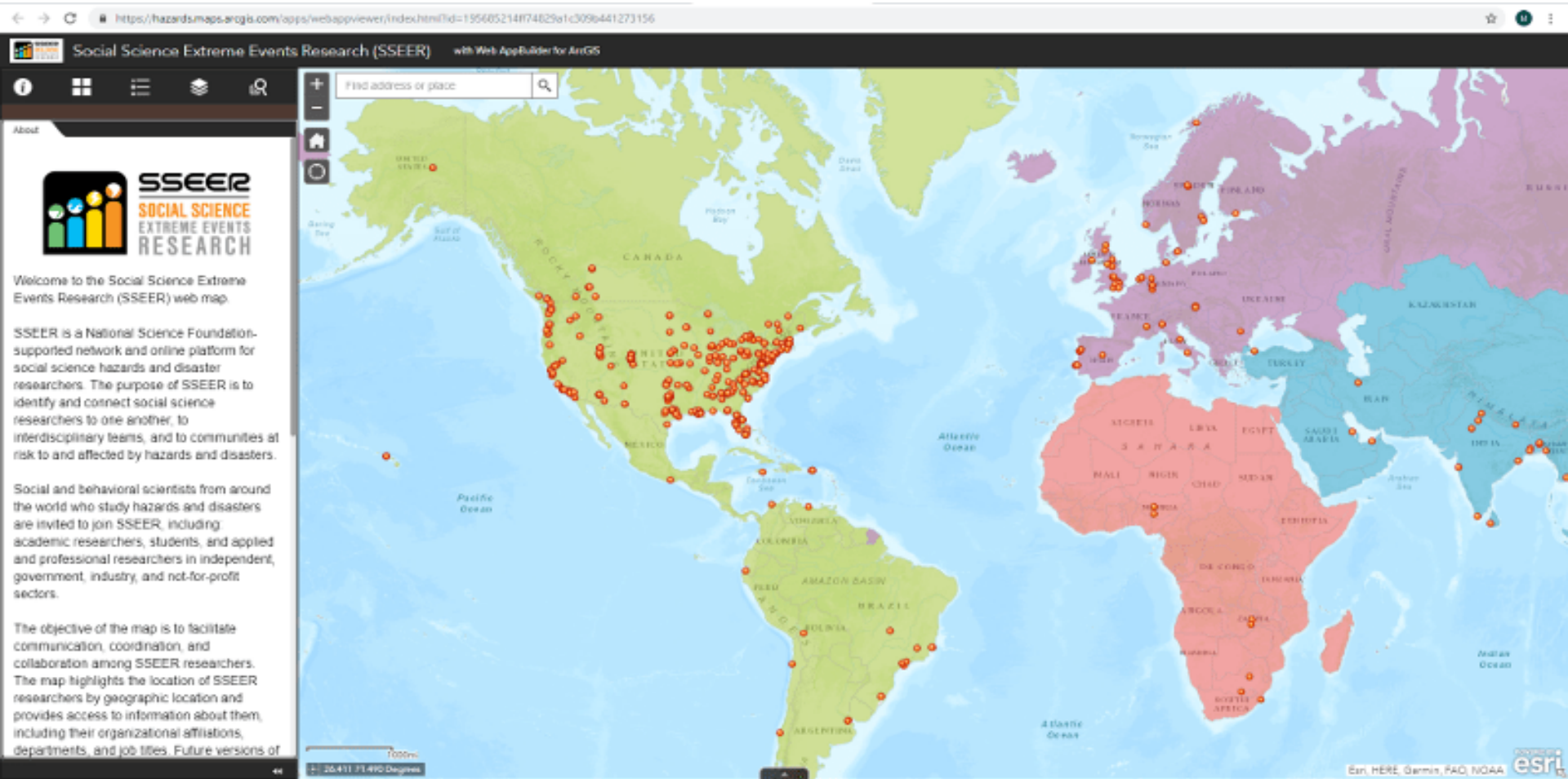


[converge.colorado.edu/research-networks](http://converge.colorado.edu/research-networks)





# SSEER Webmap



[converge.colorado.edu/research-networks/sseer](https://converge.colorado.edu/research-networks/sseer)



# SSEER Virtual Forums

[ABOUT](#)[RESEARCH NETWORKS](#)[RESOURCES](#)[DATA](#)[COMMUNICATIONS](#)[CONTACT](#)

## Social Science Extreme Events Research (SSEER) Virtual Forum:

### Puerto Rico Earthquakes

Recorded Forum

Date: Friday, January 17, 2020

Time: 2:00 to 3:00 p.m. MST

<https://converge.colorado.edu/communications/virtual-forum/sseer-puerto-rico-earthquakes>

### Resources:

A screenshot of a video player interface. The title bar at the top reads 'Social Science Extreme Events Research... Puerto Rico Earthquakes'. Below the title, the word 'Process:' is followed by a list of instructions for participants. The list includes: '(1) Locally-affected SSEER researchers', 'Name, title, affiliation', '1-2 minute update', and a note about chat box participation for SSEER network members in Puerto Rico. The video player includes standard controls like a play button, a 'Watch later' button, and a 'Share' button. The CONVERGE logo is visible in the bottom right corner of the video frame.

**SSEER Virtual Forum –**  
**Social Science Extreme Events Research... Puerto Rico Earthquakes**

**Process:**

- (1) Locally-affected SSEER researchers
  - Name, title, affiliation
  - 1-2 minute update
    - If you are an SSEER network member in Puerto Rico, please place your name in the Chat Box if you wish to provide an update. I will also ask for those in the telephone once we move through the Chat Box.



# The CONVERGE Leadership Corps is a novel organizational structure to support natural hazards research.

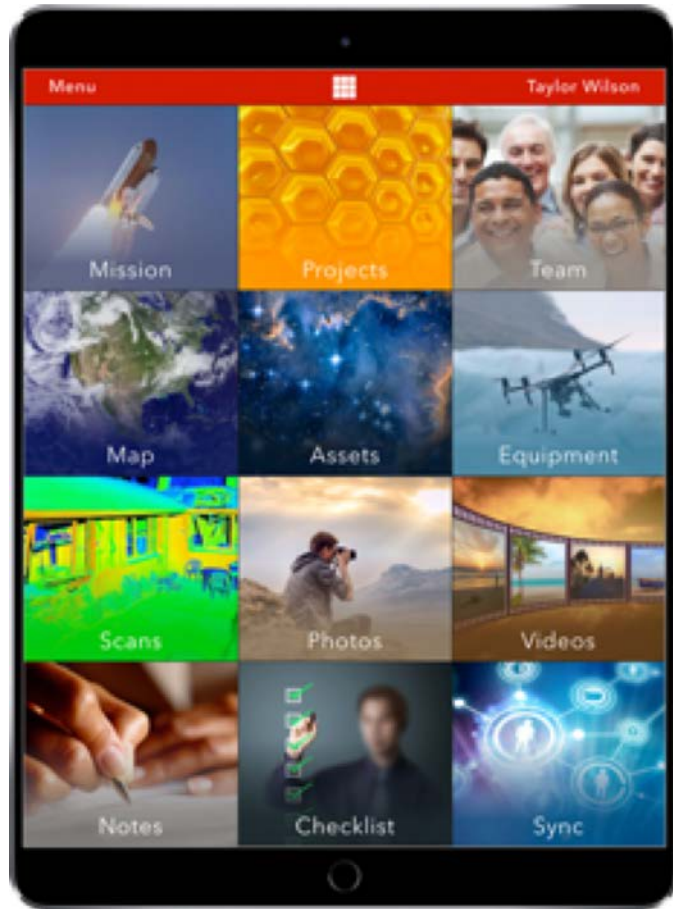
The **Leadership Corps** brings together the NSF principal investigators for the **EER networks** and the **NHERI components** that support their work.



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# Mobile Data Collection

RApp is a mobile app that provides tools for data collection in the field and synchronizes with DesignSafe Cyberinfrastructure



- iOS App for iPads
- Checklists
- Photos
- Videos
- Scans
- Questionnaires



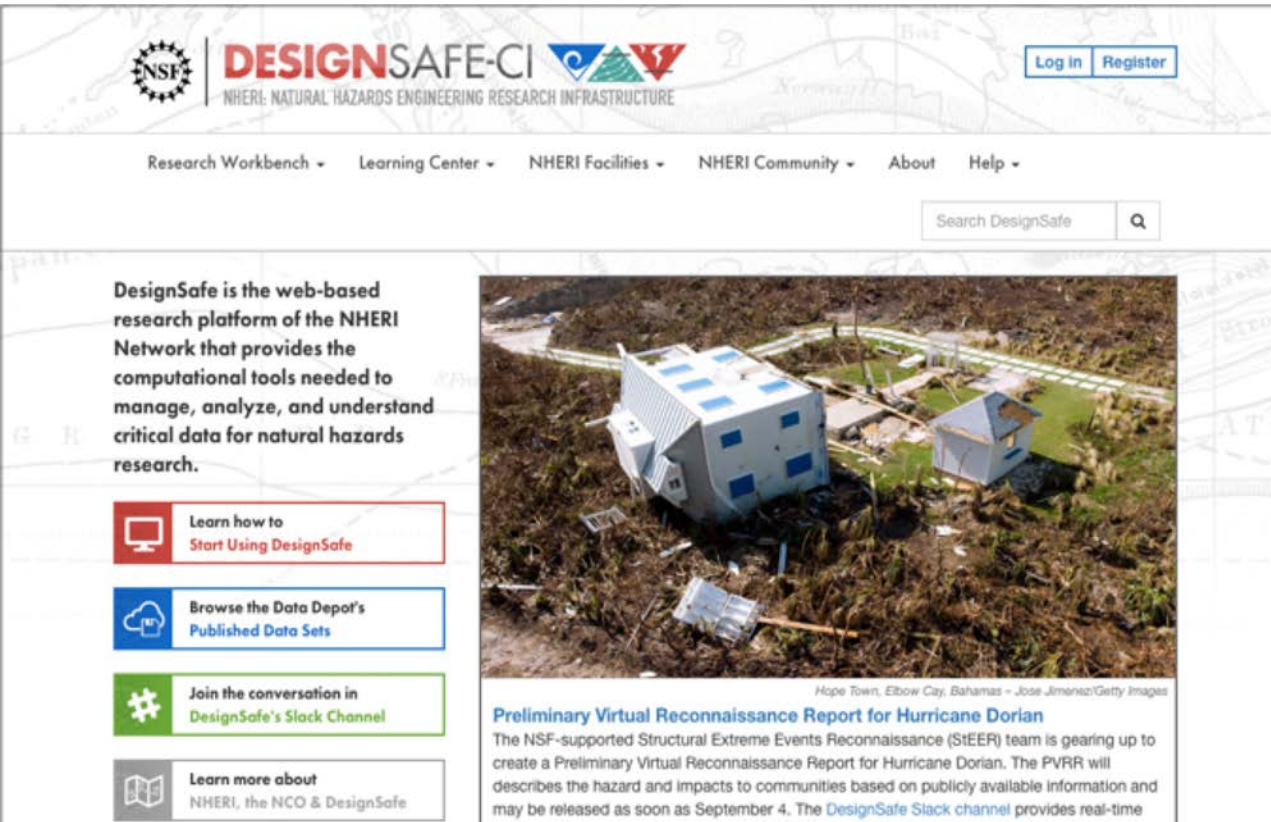
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# Data Publication



DesignSafe Cyberinfrastructure provides a secure data repository and the computational tools needed to manage, analyze, and publish critical data for natural hazards research.



**Publish Your Data! Event:**  
April 17th  
8:00am-4:30pm  
MDT



<https://converge.colorado.edu/data/events/publish-your-data/april-2020>

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# Check Sheets and Briefing Sheets



ABOUT

RESEARCH NETWORKS

RESOURCES

DATA

COMMUNICATIONS

CONTACT

## CONVERGE Extreme Events Research Check Sheets Series

These short, graphical check sheets are meant to be used as researchers design their studies, prepare to enter the field, conduct field research, and exit the field. The series, which is currently in development, will offer best practices for extreme events research and consist of 1-2 page check sheets.

A list of planned check sheets follows:

### Now Available



RESEARCH DESIGN TABLE



PART I: CONDUCTING A SYSTEMATIC LITERATURE REVIEW



PART II: SYSTEMATIC LITERATURE REVIEW TABLE



DON'T FORGET: A CHECKLIST OF THINGS TO BRING TO THE FIELD

<https://converge.colorado.edu/resources>



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# CONVERGE Training Modules



## What are they?

- FREE online, interactive courses.

## Who are they for?

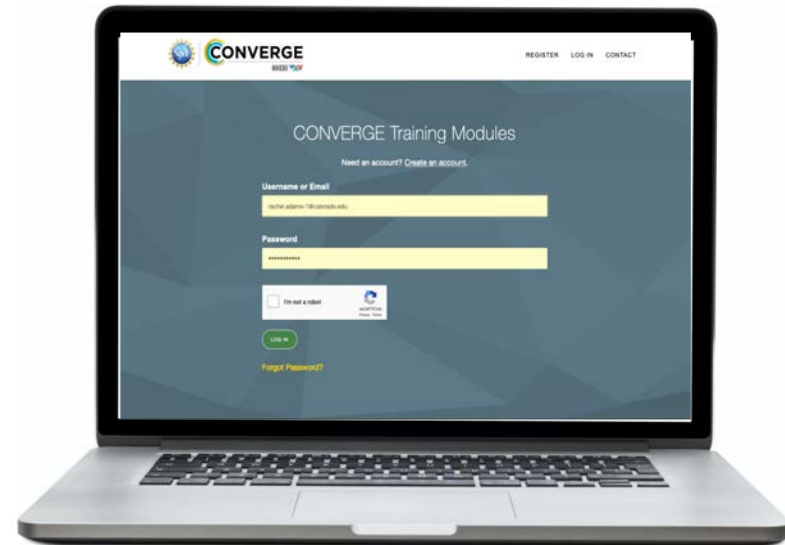
- The training modules are designed for disaster researchers and practitioners with a special emphasis on students, emerging researchers, and those those interested in joining or leading interdisciplinary teams.

## How long do they take?

- 30-60 minutes.

## Where can I register?

- [converge-training.colorado.edu/register](https://converge-training.colorado.edu/register)



## Now Available



SOCIAL VULNERABILITY AND DISASTERS



DISASTER MENTAL HEALTH



CULTURAL COMPETENCE IN HAZARDS AND DISASTER RESEARCH

## Coming Soon



CONDUCTING EMOTIONALLY CHALLENGING RESEARCH



INSTITUTIONAL REVIEW BOARD (IRB) PROCEDURES FOR HAZARDS AND DISASTER RESEARCHERS

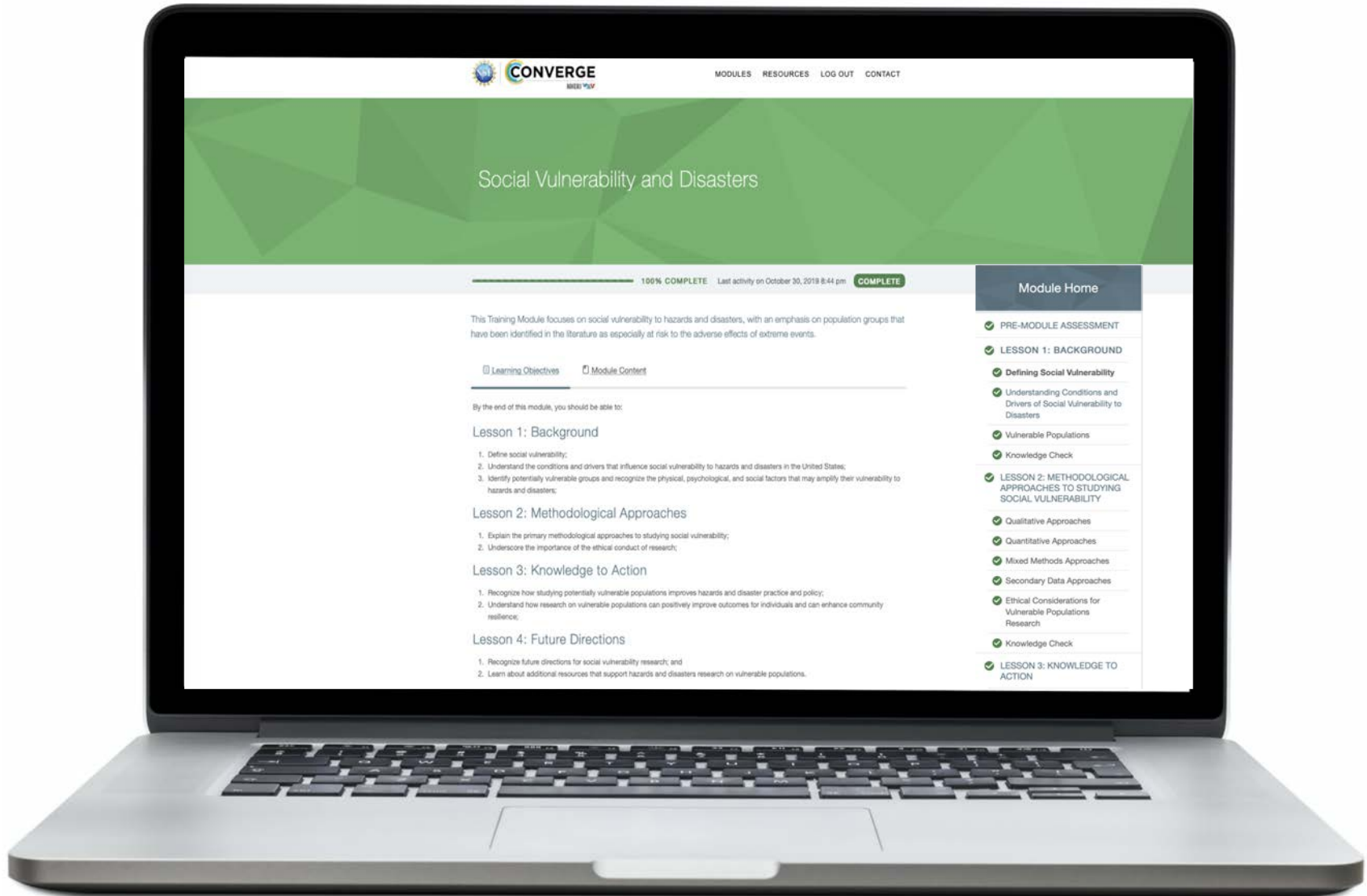


BROADER ETHICAL CONSIDERATIONS FOR HAZARDS AND DISASTER RESEARCHERS



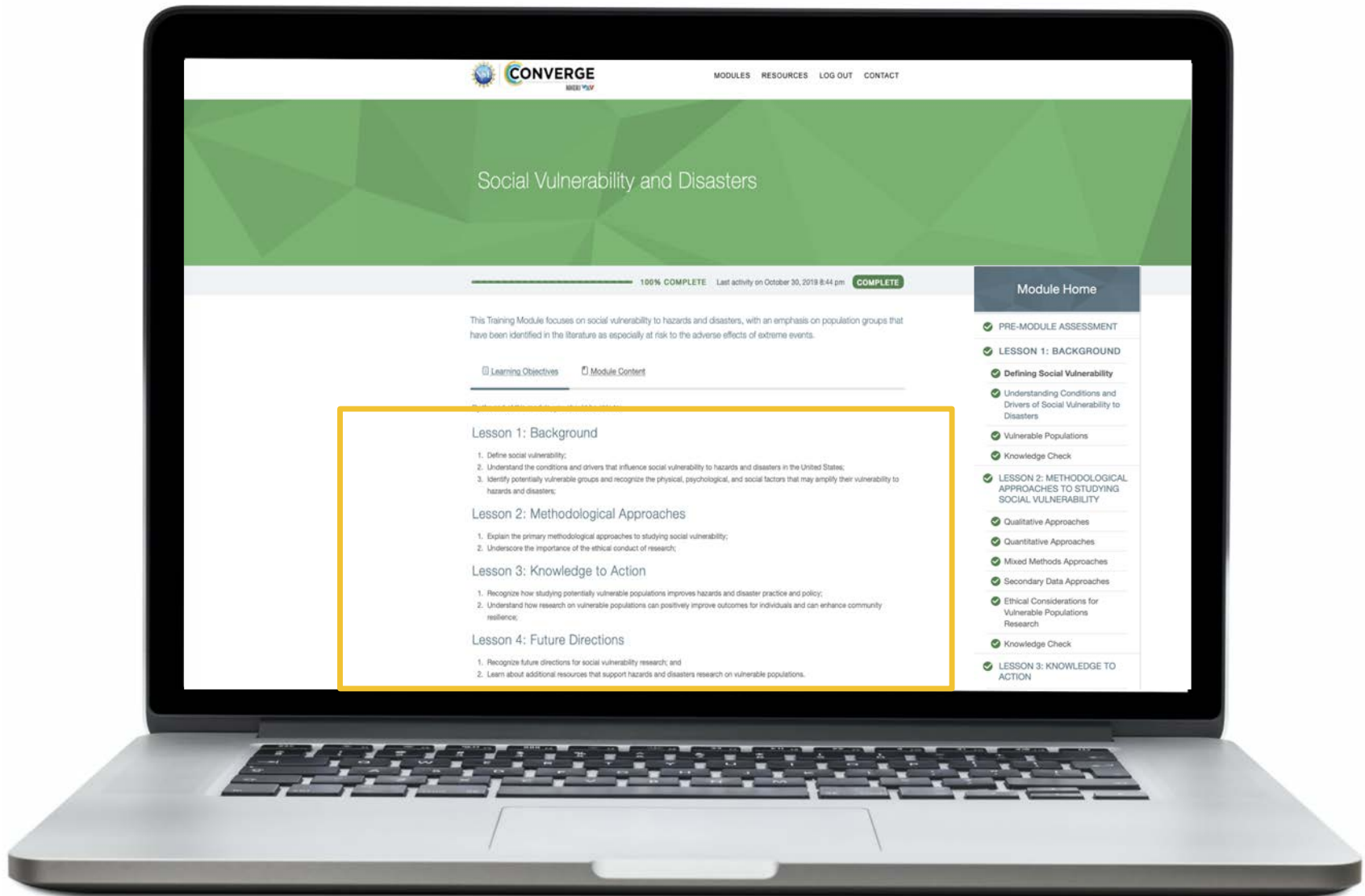
SOCIAL SCIENCE METHODS AND APPROACHES FOR HAZARDS AND DISASTER RESEARCH

# Training Module Overview





# Learning Objectives



# Learning Objectives: Social Vulnerability

## Lesson 1: Background

1. Define social vulnerability;
2. Understand the conditions and drivers that influence social vulnerability to hazards and disasters in the United States;
3. Identify potentially vulnerable groups and recognize the physical, psychological, and social factors that may amplify their vulnerability to hazards and disasters;

## Lesson 2: Methodological Approaches

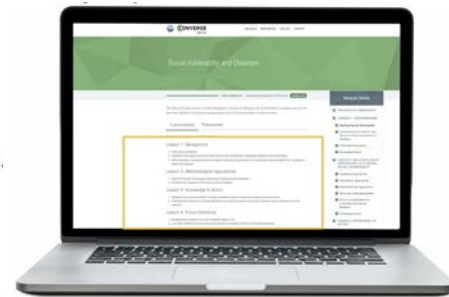
1. Explain the primary methodological approaches to studying social vulnerability;
2. Underscore the importance of the ethical conduct of research;

## Lesson 3: Knowledge to Action

1. Recognize how studying potentially vulnerable populations improves hazards and disaster practice and policy;
2. Understand how research on vulnerable populations can positively improve outcomes for individuals and can enhance community resilience;

## Lesson 4: Future Directions

1. Recognize future directions for social vulnerability research; and
2. Learn about additional resources that support hazards and disasters research on vulnerable populations.





# Learning Objectives: Disaster Mental Health

## Lesson 1: Background

1. Describe specific mental health outcomes that may emerge in the aftermath of a disaster or emergency;
2. Understand the conditions and risk factors that exist before, during, and after disaster that can influence mental health outcomes, with an emphasis on the United States;
3. Identify potentially vulnerable populations that may be at greater risk for poor mental health outcomes in the aftermath of a disaster, with an emphasis on the United States;

## Lesson 2: Methodological Approaches

1. Explain the primary methodological approaches to studying disaster mental health;
2. Understand the importance of the ethical conduct of research in disaster mental health;

## Lesson 3: Knowledge to Action

1. Recognize how studying disaster mental health improves hazards and disaster practice and policy;
2. Understand how research on disaster mental health can positively improve population outcomes;

## Lesson 4: Future Directions

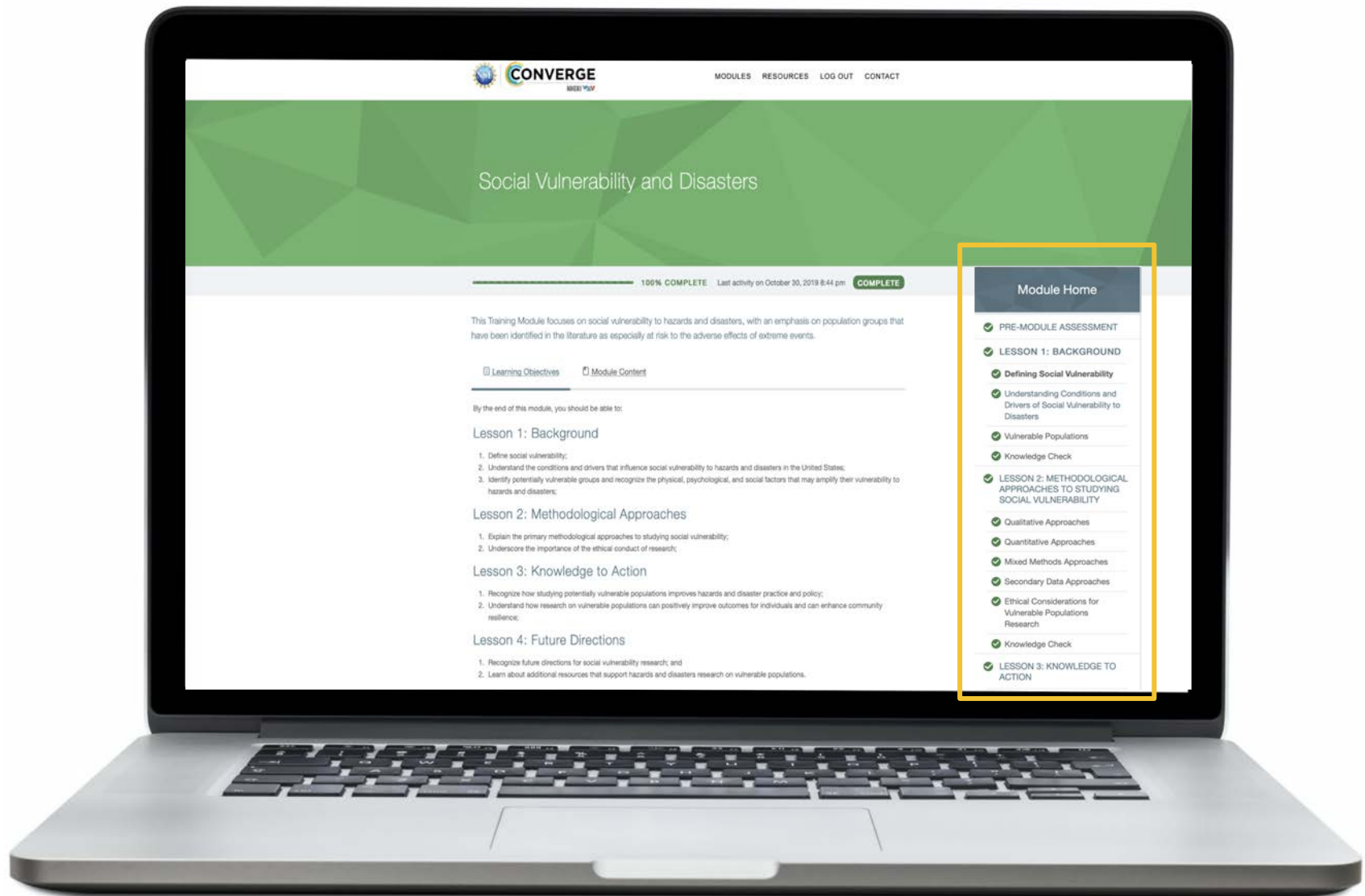
1. Recognize future directions for disaster mental health research; and
2. Learn about additional resources that support disaster mental health research.



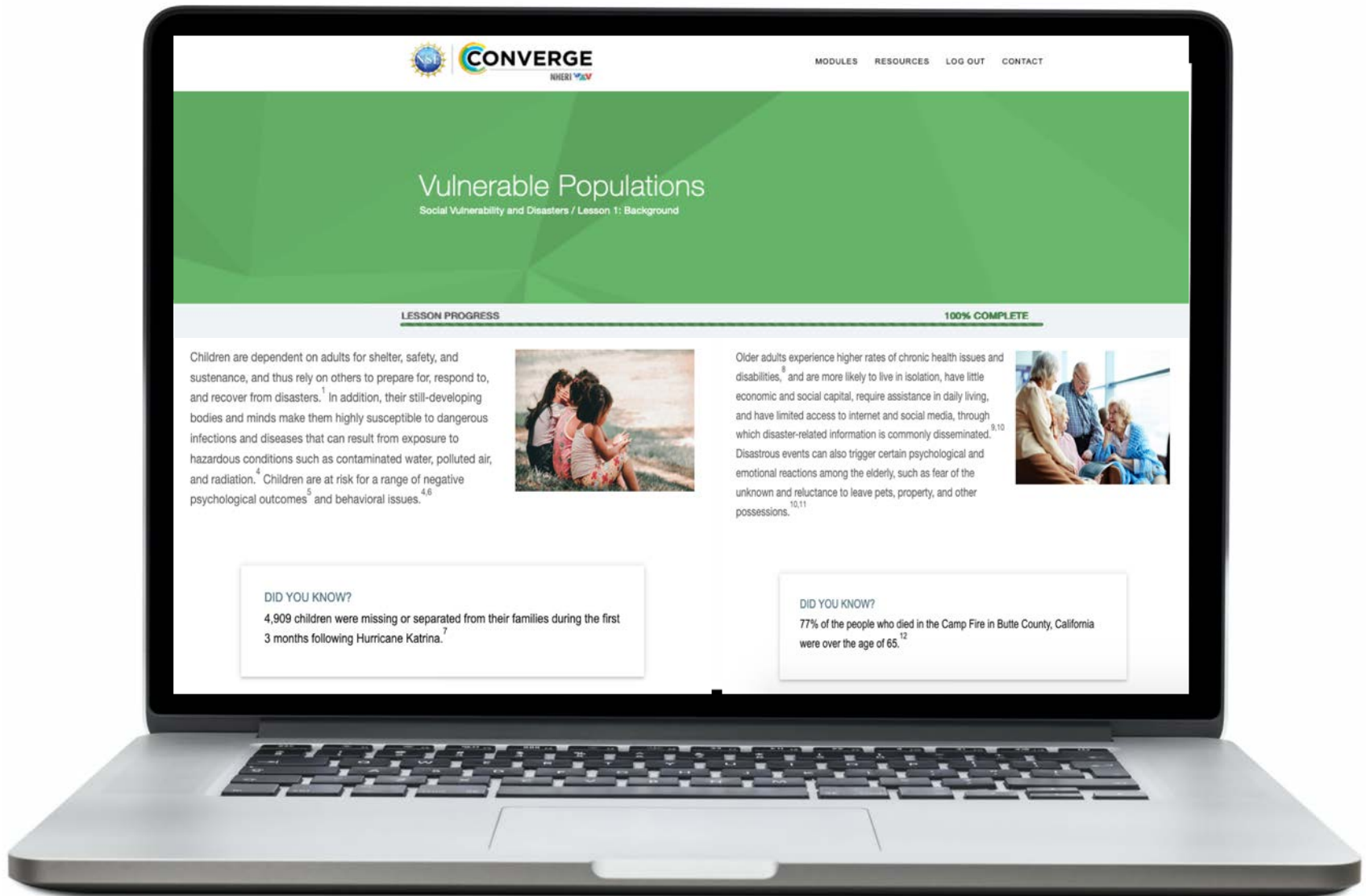
At the close of the module, you will have the opportunity to take a 10-question quiz. If you get **8 out of 10** questions correct, you will receive a certificate of completion for the CONVERGE Disaster Mental Health Training Module.



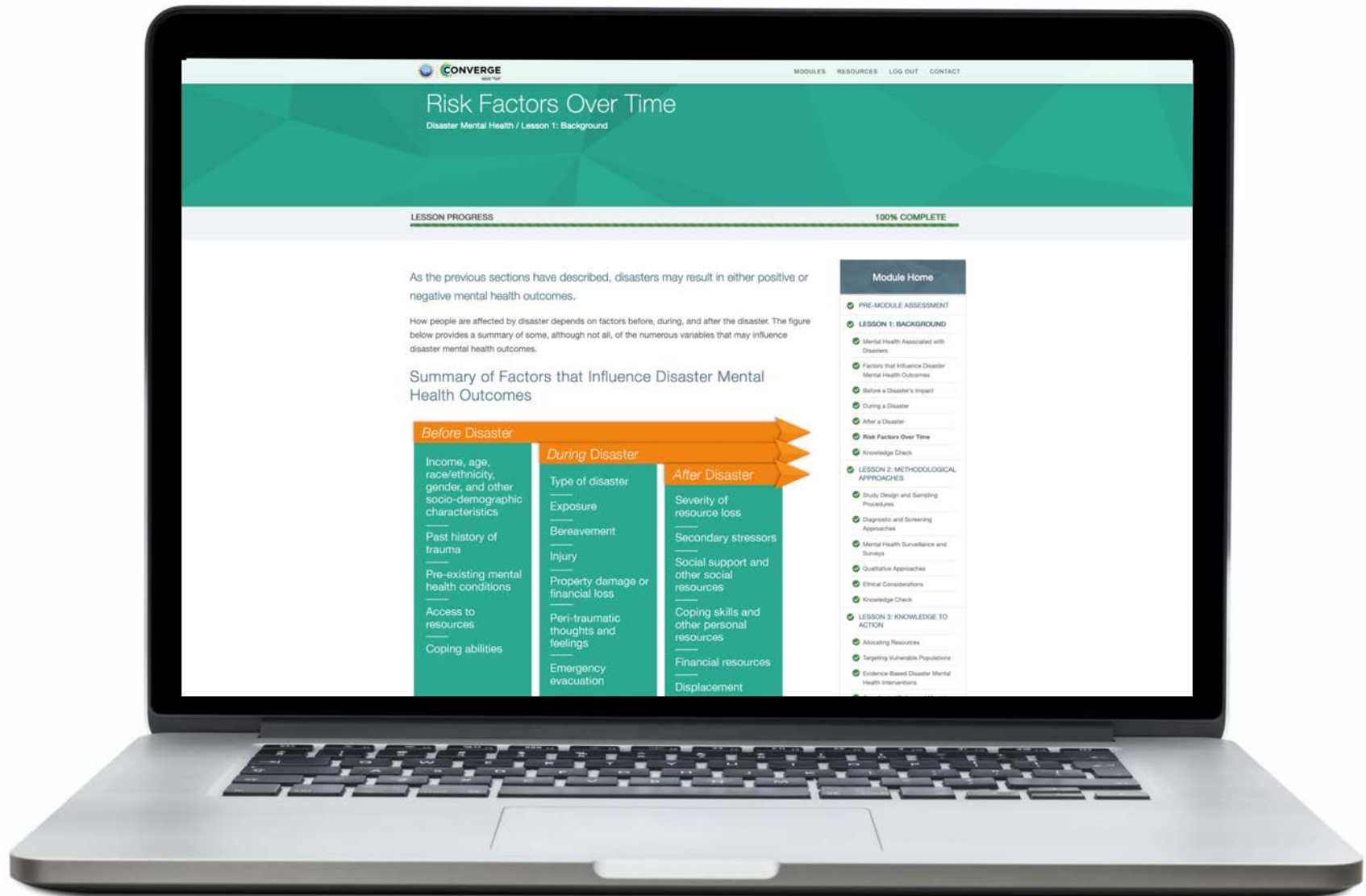
# Module Home



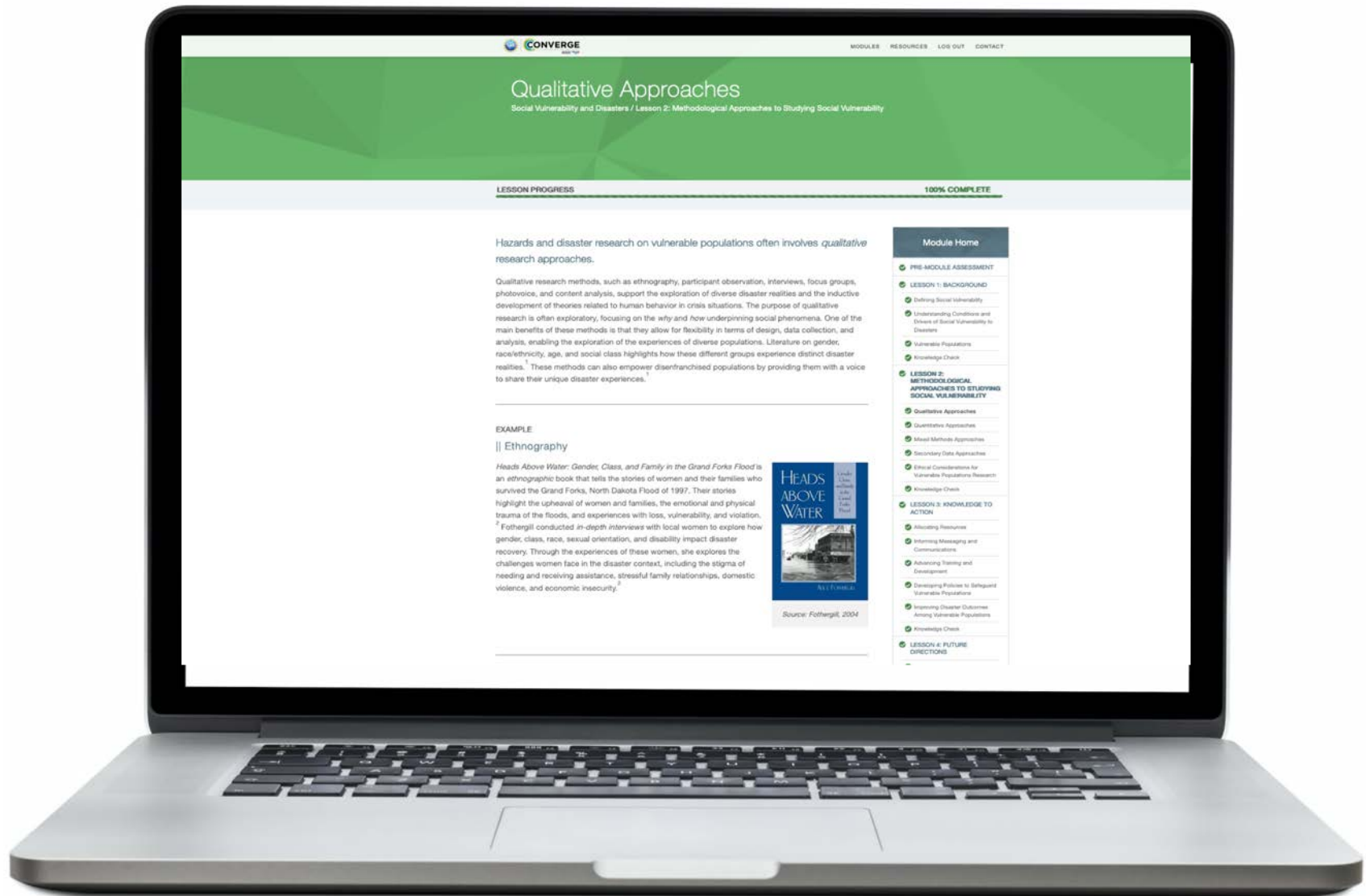
# Examples



# Logic Models

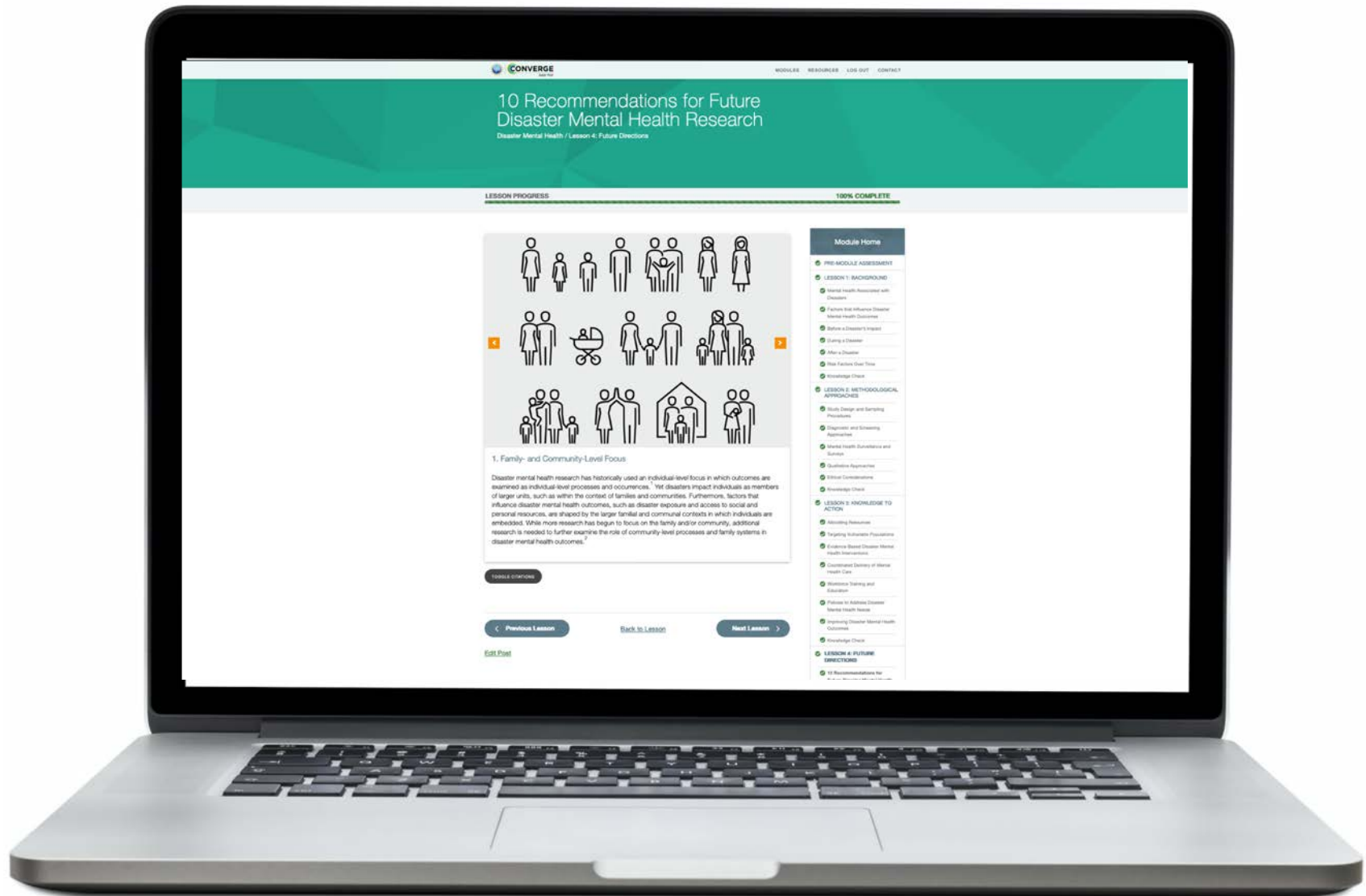


# Case Studies



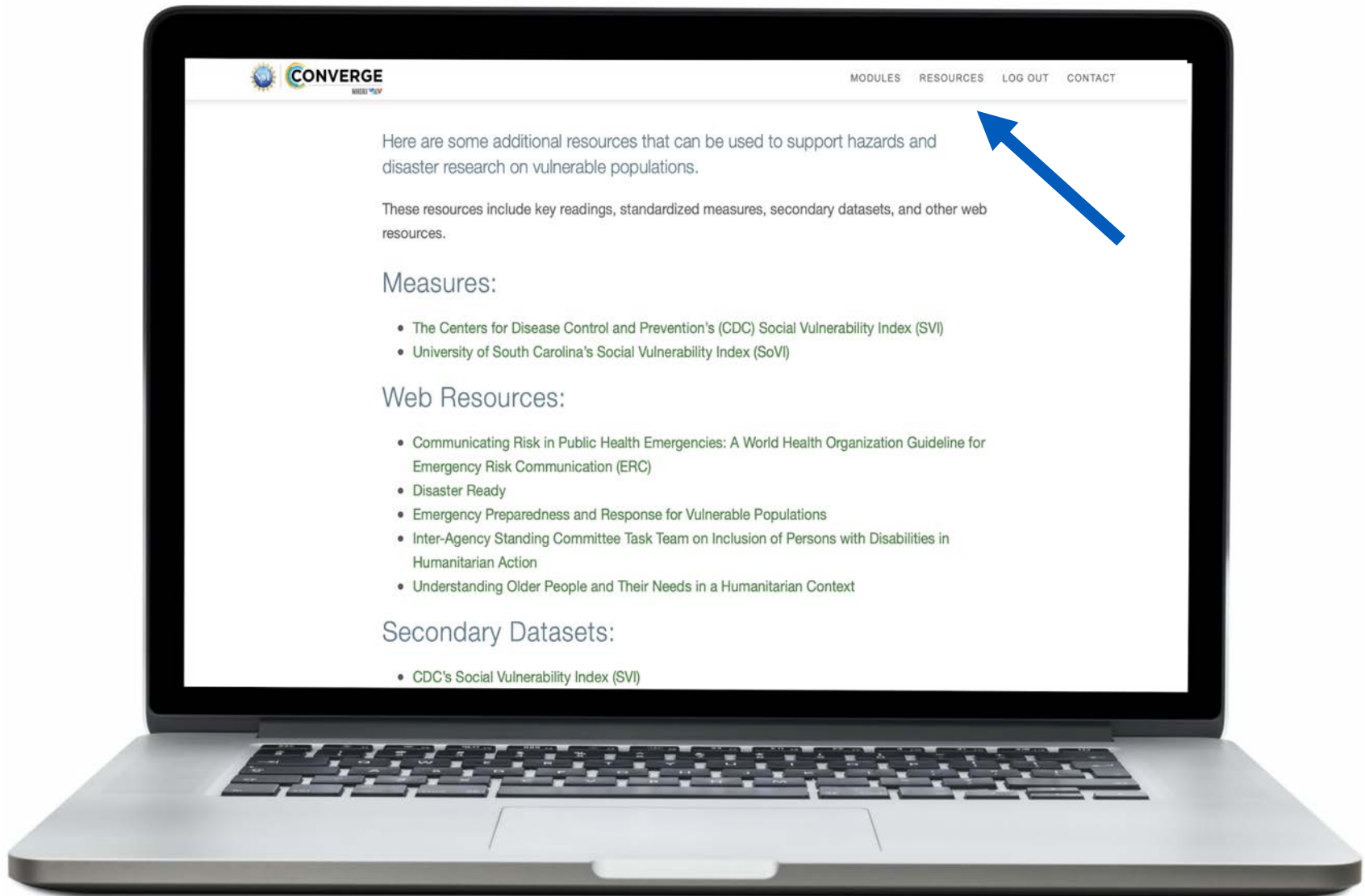


# Interactive Sliders

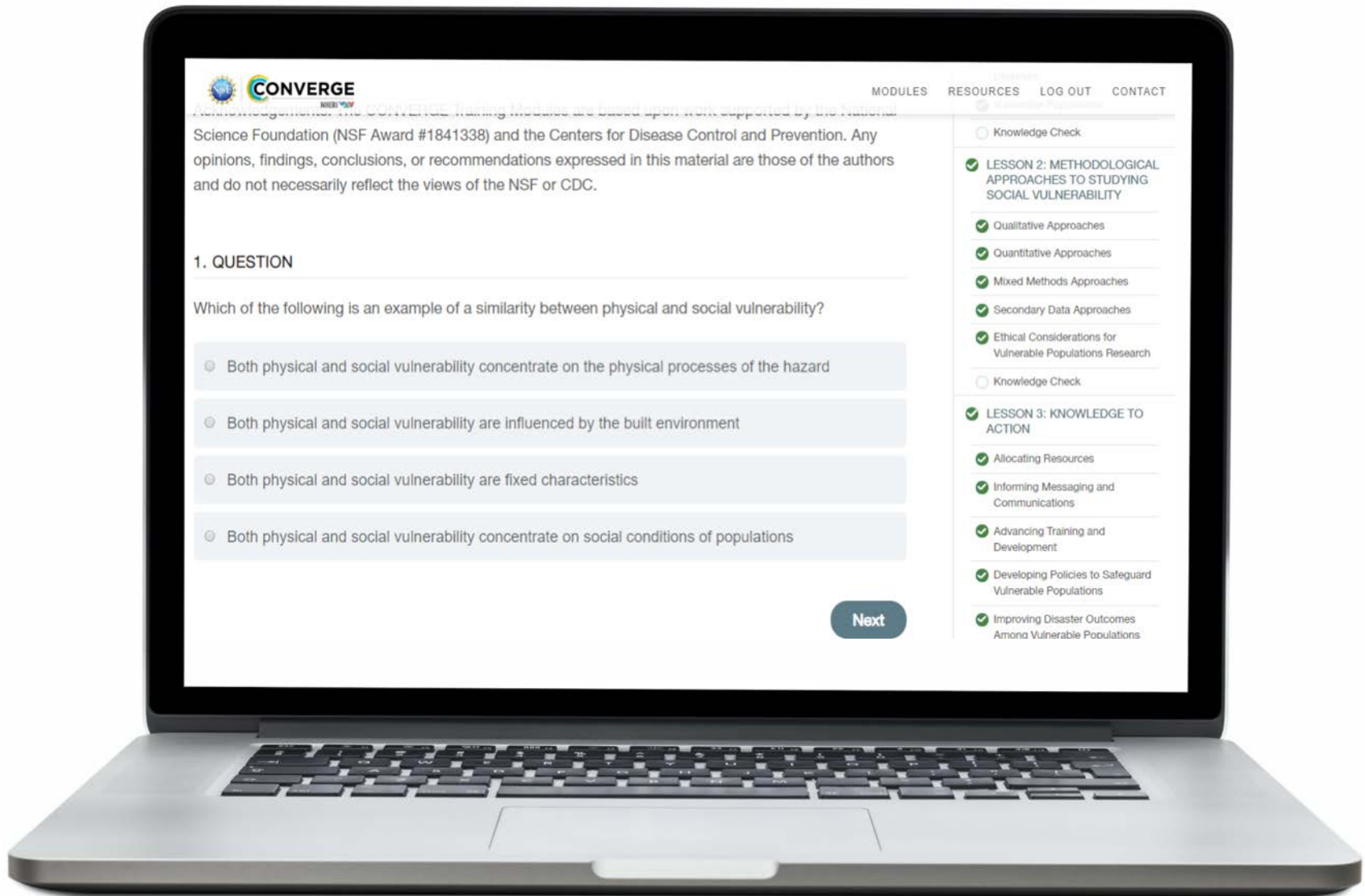




# Additional Resources



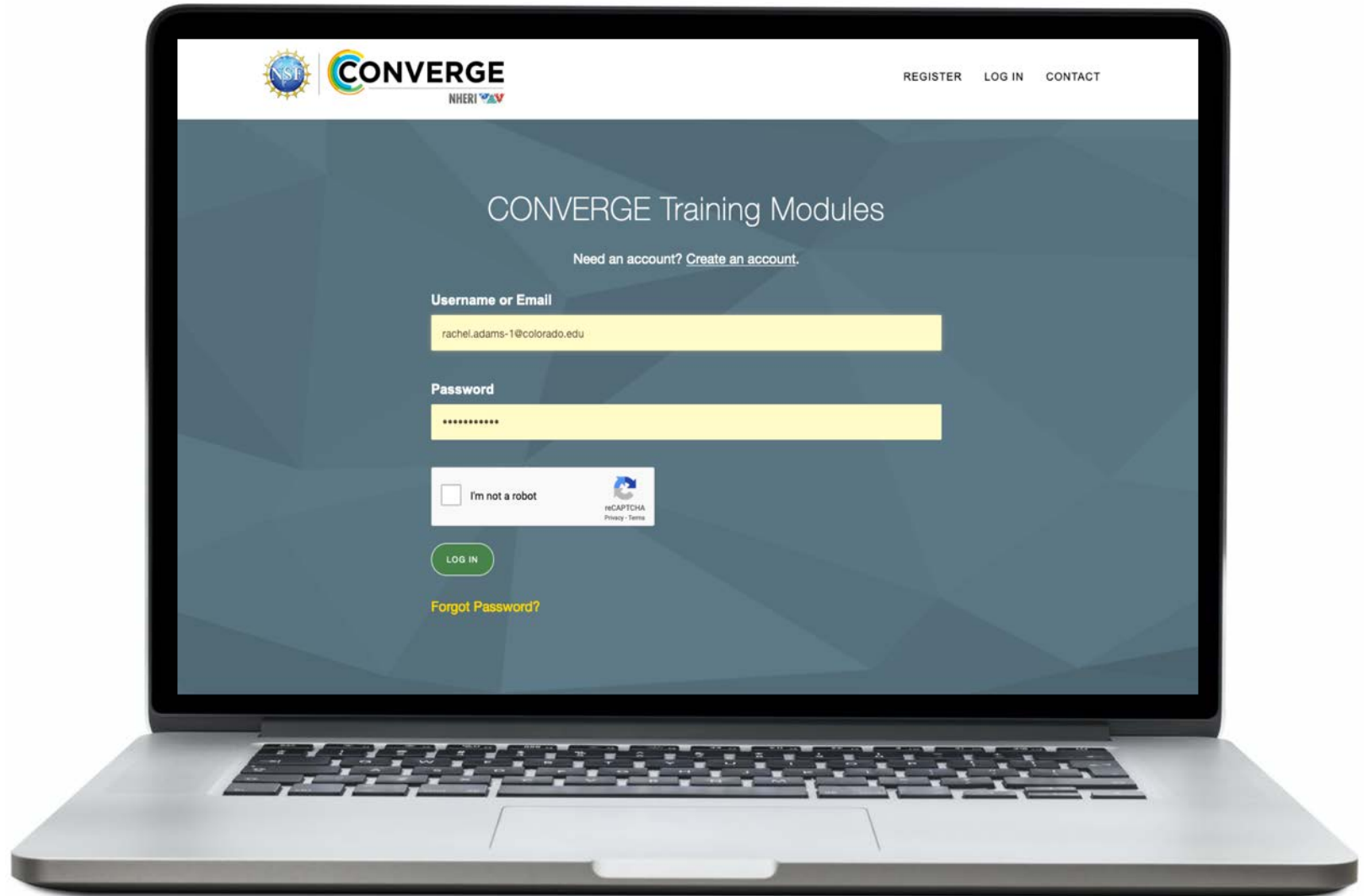
# Quiz



# Certificate of Completion



# Training Module Demonstration



# Q & A

- What are your thoughts/general impressions on the two training modules presented?
- How would you use these modules in your work?
- Who might you recommend these modules to / would you require the training for any particular group of students or others?
- Are there other topics you would like to see developed into a training module?
- Do you have any additional feedback?



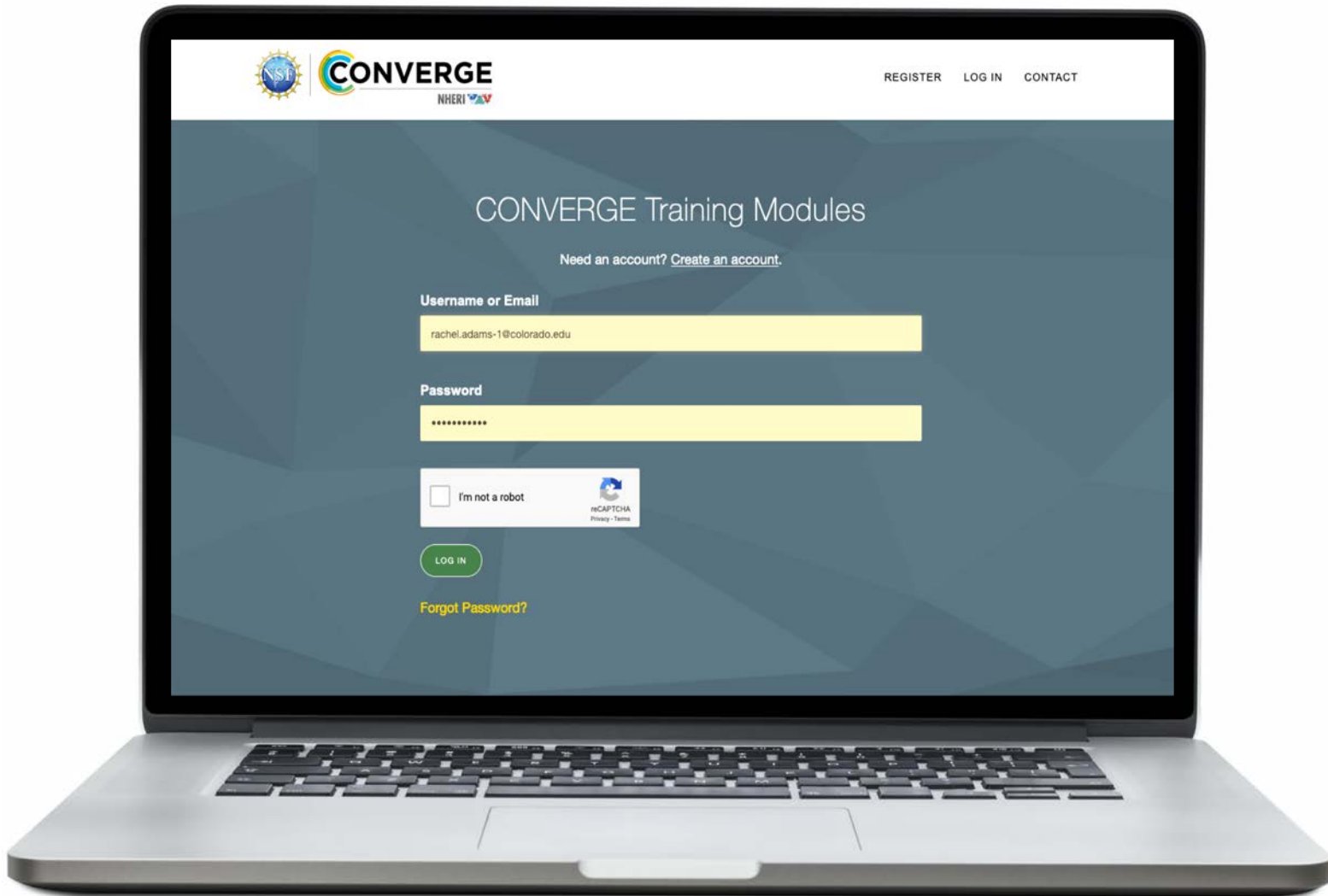
# BREAK

- Please meet back in this room in 15 minutes





# Cultural Competence Training



# Instructions

1. Go to [converge-training.colorado.edu/register](https://converge-training.colorado.edu/register)
2. Enter information to complete account registration
3. Login to your account at [converge-training.colorado.edu](https://converge-training.colorado.edu)
4. Press View All Modules
5. Choose the Cultural Competence in Hazards and Disaster Research module
6. Complete training module
7. Take final quiz to receive certificate of completion



# Q & A

- What are your thoughts/general impressions on the cultural competence module?
- How would you use this module in your work?
- Who might you recommend this module to / would you require it for any particular group?
- Do you have any additional feedback?



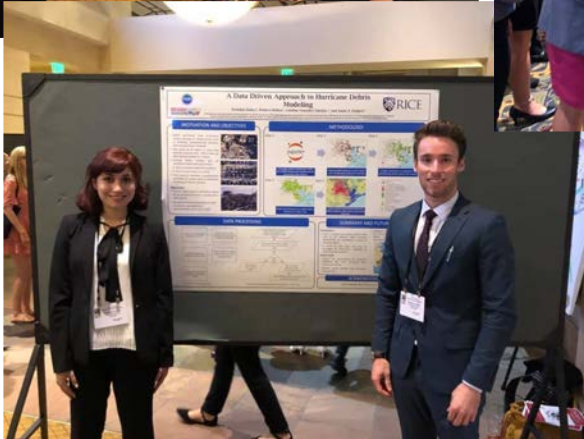
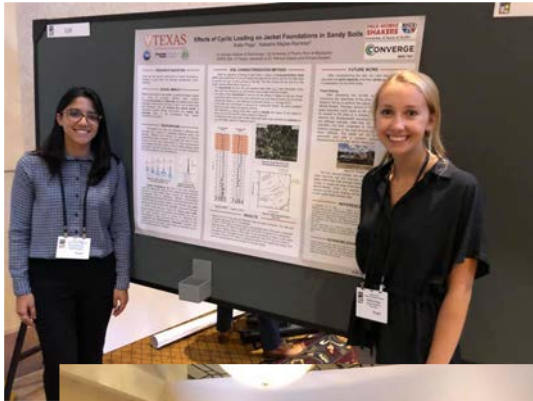
**Contact Us at:**  
[converge@colorado.edu](mailto:converge@colorado.edu)

**Access the CONVERGE Training Modules at:**  
[converge.colorado.edu/training-modules](http://converge.colorado.edu/training-modules)



# Acknowledgements

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Sign up for updates and information on new training modules at:  
[converge.colorado.edu/signup](https://converge.colorado.edu/signup)

