

**2023** RESEARCHERS MEETING

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# NEW FRONTIERS OF DISASTER RESEARCH

**ACTION-ORIENTED APPROACHES TO SOLVE COMPLEX CHALLENGES**

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July 12-13, 2023

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Omni Interlocken Hotel  
Broomfield, Colorado



**2023 RESEARCHERS MEETING**

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# **NEW FRONTIERS OF DISASTER RESEARCH**

**ACTION-ORIENTED APPROACHES TO SOLVE COMPLEX CHALLENGES**

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**JULY 12 - 13, 2023**

**OMNI INTERLOCKEN HOTEL  
BROOMFIELD, COLORADO**

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The Researchers Meeting is organized by the International Sociological Association Research Committee on Disasters (ISA-RC39) with the support of the Natural Hazards Center and the Natural Hazards Engineering Research Infrastructure (NHERI) CONVERGE facility at the University of Colorado Boulder.



University of Colorado  
Boulder



This meeting is supported by the National Science Foundation (NSF), Division of Civil, Mechanical, and Manufacturing Innovation (CMMI) (Award #1841338 and Award #1635593). Any opinions, findings, conclusions, or recommendations expressed in this meeting are those of the participants and do not necessarily reflect the views of the NSF.

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# WELCOME AND OVERVIEW

## NEW FRONTIERS OF DISASTER RESEARCH: ACTION-ORIENTED APPROACHES TO SOLVE COMPLEX CHALLENGES

Many social and environmental forces are driving ever more complex disasters that take a disproportionate toll on marginalized communities. Their compounding and cascading impacts challenge risk reduction, response, and recovery actions, while confronting researchers with novel problems to be understood and solved. In response, the 2023 Researchers Meeting will focus on convergent and action-oriented approaches to disaster research. Special sessions will showcase best practices and provide opportunities to further build interdisciplinary teams that partner with frontline communities to address increasingly frequent and intense disasters.

This year, we are excited to return to an in-person format for the first time since 2019. We received submissions from hazards and disaster researchers in two categories:

- General submissions summarizing ongoing or recently completed research projects focused on any pressing topic in the field of hazards and disaster research; and
- Thematic submissions summarizing research involving partnerships with frontline communities to conduct interdisciplinary, convergent research that informs and supports action.

In addition to providing updates on cutting-edge research, this year's program is designed to provide new opportunities for building research collaborations. New session formats include lightning talks and training and networking sessions to help establish partnerships and research-to-action synergies. We will also strengthen teams by connecting diverse researchers across career stages and disciplines.

On behalf of the Researchers Meeting Organizing Committee, we are so pleased to feature new research and are excited to see you at the Omni Interlocken Hotel in Broomfield, Colorado. We look forward to learning from you as we work together to advance hazards research and disaster science.

**Sara Hamideh, 2023 Researchers Meeting Chair**

Stony Brook University

**Sabine Loos, 2023 Researchers Meeting Co-Chair**

University of Michigan



## WIRELESS INTERNET ACCESS

Wireless Internet is available in all the Researchers Meeting areas in the hotel. Login information to access the Internet is listed below and will be displayed on social media screens in the Interlocken Foyer.

**Network Name:** Natural Hazards Workshop

**Password:** 2023Workshop

## MEALS

Tickets for lunches at the outdoor pavilion on Wednesday and Thursday should have been purchased when you registered for the Researchers Meeting. If you do not have a ticket and would still like to join, please see the staff at the registration desk in the Atrium of the hotel to see if there are any tickets still available for purchase.

If you purchased meals in advance, your name badge will have stickers indicating which lunches you will attend.

The cash bar and appetizers on Wednesday evening, morning coffee, and afternoon breaks are open to all participants. Please scan the QR code below for additional meal and dining options near the Omni Hotel.



## PARTICIPANT LIST

A list of participants and their contact information is included at the end of this program. We compiled this list of Researchers Meeting attendees to ensure that you can find and follow up with people that you meet here. Please be courteous and refrain from sending product or service solicitations to participants.

**FOR THE MOST RECENT PROGRAM UPDATES, VISIT:**

[HAZARDS.COLORADO.EDU/WORKSHOP/2023/RESEARCHERS-MEETING/SCHEDULE](https://HAZARDS.COLORADO.EDU/WORKSHOP/2023/RESEARCHERS-MEETING/SCHEDULE)



# AN INCLUSIVE MEETING, AN INCLUSIVE COMMUNITY

The Natural Hazards Center is a part of the University of Colorado Boulder, which is an institution committed to providing an inclusive environment where all individuals can achieve their academic and professional aspirations free from discrimination, harassment, and/or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy. We ask that all Researchers Meeting attendees be respectful and supportive of one another. Should an issue arise that violates these ideals, please report it to Natural Hazards Center staff members at the registration desk so appropriate action can be taken. All staff members will have ribbons on their badges.

## COVID-19 SAFETY PROTOCOLS

We are excited to return to an in-person Researchers Meeting here in Broomfield, Colorado. Please know that while we are thrilled to be together again, our top priority is to keep all members of our community safe and respect those concerned about COVID-19 or other infections.

In recognition of our commitment, we strongly encourage you to take the following precautions for the health and safety of all participants:

- Take a COVID-19 test before traveling to the Workshop.
- Do not attend any sessions or events if you are COVID-19 positive or otherwise feeling ill.
- Consider wearing a mask in all public areas, maintain a reasonable distance from others whenever possible, and frequently sanitize your hands.

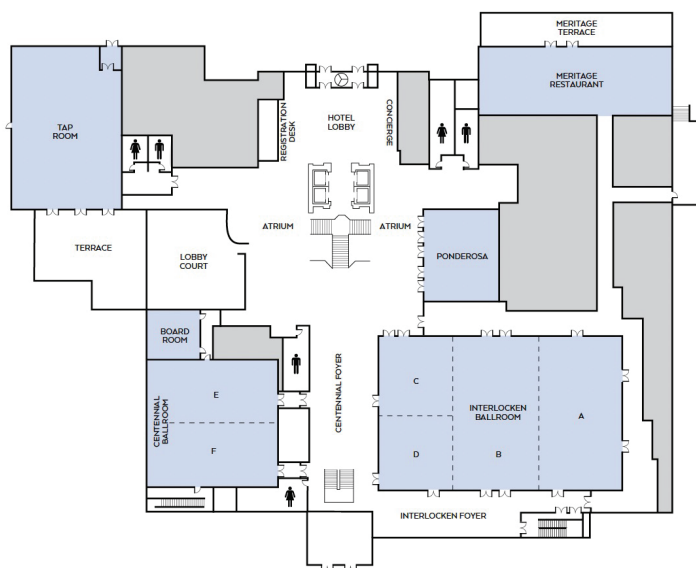
We have included a complimentary Natural Hazards Center mask in your welcome bag and additional masks can be picked up at the registration table as needed. Hand sanitizer is available in each meeting room.

We ask all participants to please follow all University of Colorado Boulder, Boulder County, and Centers for Disease Control and Prevention public health policies related to COVID-19 as guidance is subject to change at any time. We have links to each of the policies on our website at: [hazards.colorado.edu/workshop/2023/covid-19-guidance](https://hazards.colorado.edu/workshop/2023/covid-19-guidance).



# OMNI INTERLOCKEN HOTEL

## LOBBY LEVEL



## GARDEN LEVEL







## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### WEDNESDAY, JULY 12

#### REGISTRATION

12:45 to 5:45 p.m. MDT

Location: Atrium

#### LUNCH

12:45 to 2:00 p.m. MDT - Outdoor Pavilion

### WELCOME, RECOGNITION, AND OPENING REMARKS

2:00 to 2:30 p.m. MDT

Location: Centennial Ballroom

Please join us for this opening session for the 2023 Researchers Meeting, organized by the International Sociological Association Research Committee on Disasters (ISA-RC39) with the support of the Natural Hazards Center and the Natural Hazards Engineering Research Infrastructure (NHERI) CONVERGE facility at the University of Colorado Boulder. Participants will hear more about this year's theme and the organization of the sessions. In addition, ISA-RC39 leadership will recognize award recipients, share ideas for getting involved in the committee, and encourage presenters to publish their work in the *International Journal of Mass Emergencies and Disasters*.

#### SPEAKERS:

**Bill Lovekamp, Eastern Illinois University**

Past President, ISA-RC39

**Michèle Companion, University of Colorado Colorado Springs**

President, ISA-RC39

**Sara Hamideh, Stony Brook University**

Chair, Researchers Meeting Organizing Committee

**Sabine Loos, University of Michigan**

Co-Chair, Researchers Meeting Organizing Committee





## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### PLENARY—INTERDISCIPLINARY COLLABORATION, EQUITY, AND COMMUNITY ENGAGEMENT

2:30 to 4:00 p.m. MDT

Location: Centennial Ballroom

Mounting disaster losses underscore the need for deeper interdisciplinary collaboration, community engagement, and rigorous research focused on understanding and reducing risks and vulnerability. This opening plenary session features recent research concerned with co-producing knowledge with people living at risk while also addressing pressing and long-term community needs. Presenters will share methodological innovations and new findings in resilience, relocation, and other areas in the context of multiple hazards.

#### MODERATORS:

**Sara Hamideh, Stony Brook University**

Chair, Researchers Meeting Organizing Committee

**Sabine Loos, University of Michigan**

Co-Chair, Researchers Meeting Organizing Committee

#### PRESENTATIONS:

##### **Learning From Community Approaches Towards Building Resilience to Risks in Puerto Rico**

Santina Contreras, University of Southern California

Monique Lorenzo Pérez, Estudios Técnicos

##### **Mismatched Perspectives on Flood Management Among Stakeholders: Implications for Achieving Community Resilience**

Sinta Sulisty, Arizona State University

Datu Buyung Agusdinata, Arizona State University

Katja Brundiers, Arizona State University



## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### **Rural Resilience Assessments and Strategies: A Case Study in Kamiah, Idaho**

Brittany Brand, Boise State University

Carson MacPherson-Krutsky, Boise State University

### **Collaborating to Mitigate Compounding Trauma in Disaster: Evacuations and Displacement in Indigenous Communities**

Lilia Yumagulova, University of Saskatchewan

Rosalita Whitehair, Diné Nation

Simon Lambert, University of Saskatchewan

Darlene Munro, Siksika Nation

### **Adapting and Applying the Chains of Consequences Method to Post-Fire Hazard Consequences**

Briar Goldwyn, U.S. Geological Survey

James Meldrum, U.S. Geological Survey

Rudy Schuster, U.S. Geological Survey

### BREAK

4:00 to 4:15 p.m. MDT

## **TRACK 1: HAZARDS AND HEALTH HEALTH IMPACTS OF DISASTERS**

4:15 to 5:45 p.m. MDT

Location: Interlocken A

**MODERATOR:**

**Christopher Dyer, University of New Mexico—Gallup**



## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### PRESENTATIONS:

#### **Investigating the Long-Term Impacts of Hurricane Maria on Puerto Rican Households**

Nilima Islam Luba, Florida International University

Pallab Mozumder, Florida International University

#### **The Mental Health Impact of Displacement: Evidence From Hurricane Maria**

Tanvir Pavel, Rose-Hulman Institute of Technology

Pallab Mozumder, Florida International University

#### **Mental Health Emergency Preparedness for the Public School Workforce**

Courtney Welton-Mitchell, Colorado School of Public Health

Natalie Schwatka, Colorado School of Public Health

#### **Communicators and Mental Health: Considerations for Disaster Anniversaries**

Suzanne Horsley, The University of Alabama

## **TRACK 2: RISK AND RESILIENCE IN A CHANGING CLIMATE**

### **UNDERSTANDING RISK PERCEPTION**

4:15 to 5:45 p.m. MDT

Location: Interlocken B

### MODERATOR:

**Elizabeth Reddy, Colorado School of Mines**

### PRESENTATIONS:

#### **Community Perceptions of Flood Risk in the Context of Actual Hazard Indicators**

Hanadi S. Rifai, University of Houston

Kathryn F. Anderson, University of Houston

Omar B Bustami, University of Houston

Darralyn "Nicole" Hart, University of Houston



## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

Francisco Haces-Garcia, University of Houston

Craig G. Glennie, University of Houston

### **Mapping People's Perceptions of Uncertainty Associated With Natural Hazards Science Advice**

Emma Hudson-Doyle, Massey University

Jessica Thompson, Massey University

Stephen Hill, Massey University

Matt Williams, Massey University

Douglas Paton, Charles Darwin University

Sara Harrison, GNS Science

Ann Bostrom, University of Washington

Julia Becker, Massey University

### **A Century Later: Storytelling of Disasters and Perceptions of Risk**

Irene Petraroli, Kyoto University

### **Understanding Risk Perception and Protective Action Decisions Among Cascadia Coastal Emergency Managers**

Ashley Moore, University of Washington

Cassandra Jean, University of Washington

Matias Korfmacher, University of Washington

Jamie Vickery, University of Washington

Ann Bostrom, University of Washington

Nicole Errett, University of Washington

### **Risk Perception, Attitudes, and Behavior in Multi-Hazard Environments**

Lauren Vinnell, Massey University

Emma Doyle, Massey University

Julia Becker, Massey University



## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### **Examining Inequities and Risk Perceptions in Federally Overlooked 100-Year Flood Zones in Phoenix**

Aaron Flores, Arizona State University

Sara Meerow, Arizona State University

Kelli Larson, Arizona State University

### **TRACK 3: EMERGENCY MANAGEMENT**

#### **EVIDENCE-BASED PRACTICES FOR EMERGENCY MANAGEMENT**

4:15 to 5:45 p.m. MDT

Location: Interlocken C

#### **MODERATOR:**

**Naim Kapucu, University of Central Florida**

#### **PRESENTATIONS:**

##### **Preparing Emergency Management to Engage With Volunteer Rescue Organizations in Disaster**

Tyler Eutsler, Texas A&M University

J. Carlee Purdum, Texas A&M University

Michelle Annette Meyer, Texas A&M University

##### **Community-Based Disaster Response Organizations: Seattle Emergency Hubs and Sendai Bosai Leaders**

Katherine Idziorek, University of North Carolina at Charlotte

Elizabeth Maly, Tohoku University

##### **How Street-Level Bureaucrats Manage High Workloads in Disaster Management: The Taiwanese Case**

Kaiju Chang, National Chengchi University



## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### **Identifying Critical Decision Trees of First Responders in Underserved Communities During Disasters**

Khondhaker Al Momin, University of Oklahoma

Rabia Albalushi, University of Oklahoma

Maisha Khan, University of Oklahoma

Arif Mohaimin Sadri, University of Oklahoma

K. K. Muraleetharan, University of Oklahoma

Joseph Ripberger, University of Oklahoma

Golnaz Habibi, University of Oklahoma

Randy McClure, McClure Management Consultants

### **Exploring Trust in Local Organizations Involved in Emergency Management Through Boolean Measurement**

Scott Robinson, Northern Illinois University

Junghwa Choi, University of Nebraska Omaha

Clinton McNair, University of Oklahoma

## **TRACK 4: NEW APPROACHES AND MODELS IN DISASTER RESEARCH** **INCLUSION AND INNOVATION IN DISASTER RESEARCH**

4:15 to 5:45 p.m. MDT

Location: Interlocken D

### **MODERATOR:**

**Andrew Rumbach, Urban Institute**

### **PRESENTATIONS:**

#### **Examining Historically Marginalized Disaster Scholars' Experiences with National Science Foundation-Funded Resources**

Cassandra Jean, University of Washington

Jamie Vickery, University of Washington

Nicole Errett, University of Washington



## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### **The New Rapid Acquisition of Pre- and Post-Incident Disaster Data (RAPIDD) Protocol Designer**

Aubrey Miller, National Institutes of Health

Ann Liu, National Institutes of Health

Steven Ramsey, National Institutes of Health

Erin Van Fleet, National Institutes of Health

Jacqueline Barkoski, National Institutes of Health

### **The National Institutes of Health Disaster Research Portfolio: Analysis of Investment Priorities**

Laura Kiesel, MDB, Inc.

Ann Liu, National Institutes of Health

Trisha Castranio, National Institutes of Health

Richard Kwok, National Institutes of Health

Stasia Widerynski, MDB, Inc.

Betsy Galluzzo, MDB, Inc.

Aubrey Miller, National Institutes of Health

### **Implementing Successful, Just Team Science in a Post-Disaster, Hazard-Prone Landscape**

Alicia Tyson, Colorado State University

## **TRACK 5: RECOVERY AND RESILIENCE INITIATIVES**

### **HOUSING RECOVERY TRAJECTORIES AND DISPARITIES**

4:15 to 5:45 p.m. MDT

Location: Ponderosa

#### **MODERATOR:**

**Alexis Merdjanoff, New York University**

#### **PRESENTATIONS:**

### **How Mexican Immigrant Women Navigate Cumulative Disaster Impacts and Long-Term Housing Recovery**

Melissa Villarreal, Natural Hazards Center





## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### **Assessing the Impact of Presidential Declarations on Post-Flood Housing Recovery**

Edward Bolte, Stanford University

Colleen Sharp, Stanford University

Rodrigo Costa, University of Waterloo

Corinne Bowers, Stanford University

### **Exploring the Experiences of Homeowners in the Reconstruction Program in Puerto Rico**

Ivis García, Texas A&M University

### **Housing Disruption and Recovery: Longitudinal Case Study of Lumberton, North Carolina**

Michelle Stanley, Texas A&M University

Wayne Day, Texas A&M University

Michelle Annette Meyer, Texas A&M University

Donghwan Gu, National Institute of Standards and Technology

Maria Dillard, National Institute of Standards and Technology

Elaina Sutley, University of Kansas

Sara Hamideh, Stony Brook University

Leonardo Dueñas-Osorio, Rice University

Shane Crawford, National Institute of Standards and Technology

Jarrold Loerzel, National Institute of Standards and Technology

John van de Lindt, Colorado State University

Jamie Kruse, East Carolina University

### **Advancing Equity-Focused Post-Disaster Community Recovery Using a Human-Centered Uncertainty-Informed Decision Framework**

Sayanti Mukherjee, University at Buffalo

Diana Ramirez-Rios, University at Buffalo



## SESSIONS AND EVENTS: WEDNESDAY, JULY 12

### EVENING RECEPTION WITH THE RESEARCH COMMUNITY

5:45 to 8:00 p.m. MDT

Location: Lobby Court

Please join us for this casual evening reception where we will continue the day's discussions. Complimentary appetizers will be served and drinks will be available for purchase.

### ADJOURN

8:00 p.m. MDT

## THURSDAY, JULY 13

### REGISTRATION

7:30 a.m. to 3:00 p.m. MDT

Location: Atrium

### COFFEE WITH NATIONAL SCIENCE FOUNDATION PROGRAM DIRECTORS

7:30 to 8:00 a.m. MDT

Location: Interlocken C

Please rise and shine, grab a cup of coffee, and join us for this informal morning session. National Science Foundation (NSF) program directors will be there to share more about current funding priority areas. They will also answer questions about submitting solicited and unsolicited proposals to different programs, dissertation fellowships, early CAREER awards, and RAPID grants.

### SPEAKERS:

**Jacqueline Meszaros, National Science Foundation**

**Robert O'Connor, National Science Foundation**



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### BREAK

8:00 to 8:15 a.m. MDT

#### TRACK 1: HAZARDS AND HEALTH

#### RESPONSE TO AND IMPACTS OF PUBLIC HEALTH EMERGENCIES

8:15 to 9:45 a.m. MDT

Location: Interlocken C

#### MODERATOR:

**Amy Helene Schnall, Centers for Disease Control and Prevention**

#### PRESENTATIONS:

##### **Pandemic Impacts on Homelessness in the New River Valley, Virginia**

Christopher Dyer, University of New Mexico—Gallup

Sharon Christner, Harvard Divinity School

##### **Agenda Setting by Models: Exclusion, Short Circuiting, and Power in COVID-19 Policy**

Eric Kennedy, York University

##### **The Impact of Natural Disasters on Paycheck Protection Program Loan Utilization**

Azin Al Kajbaf, Johns Hopkins University

Christina Gore, National Institute of Standards and Technology

Jarrold Loerzel, National Institute of Standards and Technology

Jennifer Helgeson, National Institute of Standards and Technology

##### **The Local Approach to Public Health Emergencies**

Vaswati Chatterjee, Villanova University

Theodore Arapis, Villanova University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Resilience Amid Role Strain: Childcare Providers During the COVID-19 Pandemic**

Jessica Pardee, Rochester Institute of Technology

Jennifer Schneider, Rochester Institute of Technology

### **TRACK 2: RISK AND RESILIENCE IN A CHANGING CLIMATE INNOVATIONS IN VULNERABILITY AND RISK ASSESSMENT**

8:15 to 9:45 a.m. MDT

Location: Interlocken D

#### **MODERATOR:**

**Austin Becker, University of Rhode Island**

#### **PRESENTATIONS:**

#### **Quantifying Social Vulnerability With Empirical Predictive Modeling**

Yi Victor Wang, Chapman University

#### **Accounting for Social Equity in Quantitative Assessments of Disaster Risk**

Sabine Loos, University of Michigan

Robert Soden, University of Toronto

Karen Barns, Arup

David Lallemand, Nanyang Technological University

Jocelyn West, Natural Hazards Center

#### **Spatial Variability of Social Vulnerability Indicators to Flood Exposure**

Shelley Hoover, University of Iowa

Eric Tate, University of Iowa

#### **Network Governance for Enhancing Infrastructure Resilience to Flood Disasters**

Naim Kapucu, University of Central Florida

Abdul-Akeem Sadiq, University of Central Florida

Qian Hu, University of Central Florida

Greg Foliente, The University of Melbourne

Samiul Hasan, University of Central Florida



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Check on the Cemetery: A Geospatial Risk Assessment of Cemeteries in Southeast Louisiana**

Jennifer Blanks, Texas A&M University

Alexander Abuabara, Texas A&M University

### **Flood Hazards for Public Housing From National Risk Index and Flood Factor**

Janet Li, U.S. Department of Housing and Urban Development

## **TRACK 3: EMERGENCY MANAGEMENT**

### **IMPROVING EMERGENCY RESPONSE**

8:15 to 9:45 a.m. MDT

Location: Centennial E

### **MODERATOR:**

**Erica Gralla, The George Washington University**

### **PRESENTATIONS:**

#### **Managing Evacuation Traffic in Rapidly Intensifying Hurricanes: Insights From Florida Emergency Managers**

Barsha Manandhar, Florida International University

Nafisa Halim, Boston University

Pallab Mozumder, Florida International University

Samiul Hasan, University of Central Florida

Chiradip Chatterjee, University of North Florida

#### **Placing the Blame: Disaster Looting Myths After Hurricanes Katrina and Ian**

Mary Nelan, University of North Texas

Ashley Thomas, University of North Texas

Gary Webb, University of North Texas

#### **Don't Look Up: Local Emergency Management and Falling Space Debris**

Hans Louis-Charles, Virginia Commonwealth University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

Amidu Kalokoh, Virginia Commonwealth University

Jose Torres, The Bill Anderson Fund

Thomas Jamieson, Victoria University of Wellington

### **Tsunami Drills to Increase Community Resilience and Disaster Research**

Chen Chen, Oklahoma State University

Haizhong Wang, Oregon State University

Dan Cox, Oregon State University

Lori Cramer, Oregon State University

## **TRACK 4: NEW APPROACHES AND MODELS IN DISASTER RESEARCH INNOVATIONS IN HAZARD MODELING**

8:15 to 9:45 a.m. MDT

Location: Centennial F

### **MODERATOR:**

**Chukwuebuka Nweke, University of Southern California**

### **PRESENTATIONS:**

#### **The New Fire Weather Testbed From the National Oceanic and Atmospheric Administration**

Daniel Nietfeld, National Oceanic and Atmospheric Administration

Zach Tolby, National Oceanic and Atmospheric Administration

#### **Puerto Rico Landslide Forecast Network**

Stephen Hughes, University of Puerto Rico Mayagüez

#### **Flood Finder: An AI-Enhanced Internet Search and Information Retrieval System for Flooding**

Rohan Singh Wilkho, Texas A&M University

Nasir Gharaibeh, Texas A&M University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **A GeoAnnotator for Labeling Location Descriptions From Disaster-Related Text Messages**

Yingjie Hu, State University of New York at Buffalo

### **A Framework for Flexible Peak Storm Surge Prediction**

Benjamin Pachev, University of Texas at Austin

Prateek Arora, New York University

Carlos del-Castillo-Negrete, University of Texas at Austin

Eirik Valseeth, Norwegian University of Life Sciences

Clint Dawson, University of Texas at Austin

### **Spatio-Temporal Storm Surge Predictions Using Gaussian Process Surrogate Models**

Aikaterini Kyprioti, University of Oklahoma

Chris Irwin, University of Notre Dame

Alexandros Taflanidis, University of Notre Dame

Norberto Nadal-Caraballo, United States Army Corps of Engineers

## **TRACK 5: RECOVERY AND RESILIENCE INITIATIVES**

### **DISASTER DISPLACEMENT AND SHELTER NEEDS IN RECOVERY**

8:15 to 9:45 a.m. MDT

Location: Spruce

#### **MODERATOR:**

**Scott Robinson, The University of Oklahoma**

#### **PRESENTATIONS:**

#### **Safe but Stifled: The Impact of Risk and Resilience Among Shelter Residents**

Kaila Witkowski, Florida Atlantic University

Matt Marr, Florida International University

Natalia da Silva, Stetson University

Jack Vertovec, Behavioral Science Research Institute





## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **The Governance of Post-Disaster Relocation Sites as “Camps”**

Christine Gibb, University of Ottawa

Kaira Zoe Alburo Cañete, International Institute of Social Studies

Kanako Iuchi, Tohoku University

### **Temperatures Experienced by Unsheltered Communities Based on Different Tent Shading Materials**

Joseph Karanja, Arizona State University

Jaime Vieira, University of Arizona

Jennifer Vanos, Arizona State University

### **A Framework for Estimating Post-Disaster Long-Term Homeless K-12 Students**

Ram Krishna Mazumder, Arcadis

S. Amin Enderami, University of Kansas

Nathanael Rosenheim, Texas A&M University

Elaina Sutley, University of Kansas

Michelle Stanley, Texas A&M University

Michelle Annette Meyer, Texas A&M University

### BREAK

9:45 to 10:15 a.m. MDT

## **TRACK 1: HAZARDS AND HEALTH**

### **COMPOUNDING EFFECTS OF DISASTERS AND HEALTH VULNERABILITY**

10:15 to 11:45 a.m. MDT

Location: Interlocken C

#### **MODERATOR:**

**Oronde Drakes, U.S. Geological Survey**



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### LIGHTNING TALKS:

#### **Analyzing Health Impacts of Natural Disasters in Puerto Rico for Promoting Resilience**

Pallab Mozumder, Florida International University

Linnette Rodriguez-Figueroa, University of Puerto Rico

Mayra Quiles-Miranda, University of Puerto Rico

Barsha Manandhar, Florida International University

Sisi Meng, University of Notre Dame

Nafisa Halim, Boston University

#### **Leaving No One Behind: A Public Policy Perspective on Disability-Inclusive Disaster Risk Reduction**

Valentina Grossi, Global Policy Insights

#### **Examining the Impact of Financial Loss on Depression Symptoms Among Hurricane Survivors in North Carolina**

Kristen N. Cowan, University of North Carolina

Elizabeth Frankenberg, University of North Carolina

Nikhil Kothegal, University of North Carolina

Nathan Dollar, University of North Carolina

#### **Children With Disabilities and Social Vulnerability During Pandemic School Closures**

Shawna Bendeck, Colorado State University

#### **Excess Mortality Modeling of Hurricane Michael**

Blake Scott, University of South Florida

Russell Kirby, University of South Florida

Anthony Masys, University of South Florida

Jennifer Marshall, University of South Florida

Jaime Corvin, University of South Florida

#### **Analysis of the Impact of the COVID-19 Epidemic on People's Travel**

Jen te Pai, National Chengchi University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Integrative Planning in Tribal Communities: The Hazards-Health Nexus**

Nicole S. Hutton, Old Dominion University

Wie Yusuf, Old Dominion University

### **Risk and Protective Factors Associated With Post-Tornado Distress Among Persons with Disabilities**

Sangwon Lee, University of Tennessee, Knoxville

Jennifer First, University of Tennessee, Knoxville

## **TRACK 2: RISK AND RESILIENCE IN A CHANGING CLIMATE CRITICAL APPROACHES IN DISASTER RISK REDUCTION**

10:15 to 11:45 a.m. MDT

Location: Interlocken D

### **MODERATOR:**

**Maria Ilcheva, Florida International University**

### **LIGHTNING TALKS:**

#### **Down the Rabbit Hole: How Free Web Searching Can Sap Preparedness Motivation**

Erik Nilsen, Lewis & Clark College

Bryan Sebok, Lewis & Clark College

Elizabeth Safran, Lewis & Clark College

Peter Drake, Lewis & Clark College

#### **How Does Hazard Information Affect Risk Perceptions During a Rare Tornado Event?**

Hao Zhang, University of North Texas

Barend Stander, University of North Texas

Chih-Chun Lin, Jacksonville State University

H. Tristan Wu, University of North Texas

Haley Murphy, Oklahoma State University

Shih-Kai Huang, Jacksonville State University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **A Decision Support Framework to Integrate Household-Level Risk Perception on Multiple Hazards**

H. M. Imran Kays, University of Oklahoma

Arif Mohaimin Sadri, University of Oklahoma

K. K. “Muralee” Muraleetharan, University of Oklahoma

### **Exploring Ways Cultural Meaning-Making Ties Smokey Bear to Disaster Risk Creation**

Jay Balagna, Pardee RAND Graduate School

### **Using Engineering Models to Compare Social Impacts of Multiple Hazards**

Emily Mongold, Stanford University

Jack Baker, Stanford University

Rodrigo Costa, University of Waterloo

### **24-Hour Weather Prediction Technology and Evacuation Behavior: Resident Workshops in Japan**

Kensuke Otsuyama, The University of Tokyo

Shinichiro Nakamura, Nagoya University

Fuko Nakai, Nagoya Institute of Technology

## **TRACK 3: EMERGENCY MANAGEMENT**

### **PREPAREDNESS—LESSONS AND BEST PRACTICES**

10:15 to 11:45 a.m. MDT

Location: Centennial E

#### **MODERATOR:**

**Emma Hudson-Doyle, Massey University**

#### **LIGHTNING TALKS:**

### **Understanding Community Preparedness and Emergency Supply Kit Knowledge, Attitudes, and Practices**

Amy Helene Schnall, Centers for Disease Control and Prevention

Arianna Hanchey, Centers for Disease Control and Prevention



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Impact of Emergency Supply Kit Use Among Those Impacted by Hurricane Ian**

Amy Helene Schnall, Centers for Disease Control and Prevention

Arianna Hanchey, Centers for Disease Control and Prevention

Alicia Frasier, RTI International

Laura DiGrande, RTI International

### **Centers for Medicare and Medicaid Emergency Preparedness Rule: Improving Disaster Preparation in U.S. Nursing Homes**

Tihara Sommers, Tulane University

### **Incorporating Pets in Disaster Planning in Atlantic Canada: A Collaborative Approach**

Kyle Breen, Dalhousie University

Haorui Wu, Dalhousie University

Amy Birschall, Dalhousie University

Amy Schneider, Valley Veterinary Hospital

Jessica Rock, Valley Veterinary Hospital

### **State Compound Hazard Planning and Emergency Manager Experience During COVID-19**

Logan Gerber-Chavez, University of Delaware

### **Debated or Deluged: Social Media Conversation Surrounding Drought Conditions Around FEMA Region 7**

Cory Armstrong, University of Nebraska—Lincoln

Sharon Meaker-Medcalf, University of Nebraska Medical Center

Sharon Baldinelli, University of Nebraska—Lincoln

Kelly Smith, University of Nebraska—Lincoln

### **What Are Our Plans Missing and What Are Our Missing Plans?**

Vivien Coop, Swinomish Indian Tribal Community

Rebekah Paci-Green, Western Washington University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Exploring Vulnerability and Preparedness: Applying the Collaborative Multiracial Post-Election Survey to Disaster Studies**

Jason Pudlo, East Carolina University

William Curtis Ellis, Oral Roberts University

Ernest McGowen, University of Richmond

### **TRACK 4: NEW APPROACHES AND MODELS IN DISASTER RESEARCH ACTION- AND EQUITY-ORIENTED APPROACHES TO DISASTER RESEARCH**

10:15 to 11:45 a.m. MDT

Location: Centennial F

#### **MODERATOR:**

**Carson Macpherson-Krutsky, Natural Hazards Center**

#### **LIGHTNING TALKS:**

#### **Analysis of Lifestyle Recovery for Data-Driven Insights of Disaster Impacts**

Natalie Coleman, Texas A&M University

Ali Mostafavi, Texas A&M University

#### **Modeling the Interaction Between Human Performance and Cascading Hazards**

Pegah Farshadmanesh, University of Illinois Urbana-Champaign

#### **Agriculture Flood Loss and Social Vulnerability in the United States**

Md. Asif Rahman, University of Iowa

Eric Tate, University of Iowa

#### **Comparing Geographic Information System-Based Flood Resilience Models in a Developing Nation**

Ahmad Mojtoba Riyadh, University of Utah

Tom Cova, University of Utah

Tim Collins, University of Utah

Richard Medina, University of Utah



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Science-Practice Partnerships for Using Hurricane Forecasts To Enhance Florida's Critical Infrastructure Resilience**

Yue Ge, University of Central Florida

Theresa Phoa, University of Central Florida

Rebecca Morss, National Center for Atmospheric Research

### **Closing the Gap Between Knowledge and Action: The Gamble of Seismic Risk**

Louise Comfort, University of California, Berkeley

Suleyman Celik, Anadolu University

Burcak Erkan, Middle East Technical University

### **Sensitive Data Handling Lessons From Engagement With Rhode Island's Critical Infrastructure Sector**

Austin Becker, University of Rhode Island

Isaac Ginis, University of Rhode Island

Pam Rubinoff, University of Rhode Island

Kyle McElroy, University of Rhode Island

Peter Stempel, Penn State University

Noah Hallisey, University of Rhode Island

Chris Damon, University of Rhode Island

### **Ethical Implications of Participatory Action Research in Community-Based Response to Climate Change**

Haleh Mehdipour, University of Florida

Jason von Meding, University of Florida

Marjorie Prokosch, Rochester Institute of Technology

## **TRACK 5: RECOVERY AND RESILIENCE INITIATIVES**

### **HOUSEHOLD AND BUSINESS RECOVERY TRAJECTORIES AND DISPARITIES**

10:15 to 11:45 a.m. MDT

Location: Spruce





## SESSIONS AND EVENTS: THURSDAY, JULY 13

### MODERATOR:

**Santina Contreras, University of Southern California**

### LIGHTNING TALKS:

**Experiences of Vulnerable Households in Low-Attention Disasters: Marshalltown, Iowa**

Payel Sen, Stony Brook University

Sara Hamideh, Stony Brook University

**Progress and Pitfalls of Recovery After the Marshall Fire**

Andrew Rumbach, Urban Institute

Katie Dickinson, Colorado School of Public Health

Elizabeth Albright, Duke University

Deseraï Crow, University of Colorado Denver

**Patterns of Access and the Role of Financial Resources in Housing Recovery**

Sara Hamideh, Stony Brook University

Asha Venugopalan, Stony Brook University

Elaina Sutley, University of Kansas

Maria Dillard, National Institute of Standards and Technology

**Opportunities for Implementation of Disaster Risk Management Strategies Among Public Housing Authorities**

Amber Khan, University of Washington

Andrew Aurand, National Low Income Housing Coalition

Sara Hamideh, Stony Brook University

Jamie Vickery, University of Washington

Rebecca Walter, University of Washington

Nicole Errett, University of Washington

**Planning for Post-Disaster Public Housing Recovery: Communities With Near Experiences of Disasters**

Sayma Khajehei, The University of Utah

Divya Chandrasekhar, The University of Utah



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **The Role of Tourism in Disaster Recovery: Tacloban's Recovery From Typhoon Haiyan**

Celina Mohni, University of Waterloo

### **Business Recovery in Lumberton, North Carolina: The Impact of Consecutive Disasters**

Maria Gomez Saldarriaga, East Carolina University

Jennifer Helgeson, National Institute of Standards and Technology

Elaina Sutley, University of Kansas

Maria Dillard, National Institute of Standards and Technology

Bradley Ewing, Texas Tech University

Jamie Kruse, East Carolina University

Maria Watson, University of Florida

### LUNCH

11:45 a.m. to 1:15 p.m. MDT - Outdoor Pavilion



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### TRACK 1: TRAINING AND NETWORKING

#### SHARED-USE FACILITIES AND RESEARCH NETWORKS

1:15 to 2:45 p.m. MDT

Location: Interlocken C

Please join this session to learn more about National Science Foundation (NSF)-funded shared-use facilities through the Natural Hazards Engineering Research Infrastructure (NHERI) and research networks for extreme events reconnaissance and research. Participants will find out how to draw on the NHERI Science Plan in proposals, get involved in research coordination networks, access free training resources for ethical reconnaissance, and use research equipment and cyberinfrastructure for secure data management and publication.

#### MODERATOR:

**Jacqueline Meszaros, National Science Foundation**

#### SPEAKERS:

Rachel Adams, Natural Hazards Center

Tim Cockerill, University of Texas at Austin

Daniel Cox, Oregon State University

Nicole Errett, University of Washington

Jennifer Horney, University of Delaware

Lori Peek, Natural Hazards Center

### TRACK 2: RISK AND RESILIENCE IN A CHANGING CLIMATE

#### CONVERGENT APPROACHES TO CLIMATE RESILIENCE

1:15 to 2:45 p.m. MDT

Location: Interlocken D

#### MODERATOR:

**Alyssa Provencio, University of Central Oklahoma**



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### LIGHTNING TALKS:

#### **Building Community Capacity to Respond to Urban Extreme Heat in Knoxville, Tennessee**

Jennifer First, University of Tennessee, Knoxville

Sangwon Lee, University of Tennessee, Knoxville

Emily Norris, University of Tennessee, Knoxville

Kristina Kintziger, University of Nebraska Medical Center

Kelsey Ellis, University of Tennessee, Knoxville

#### **Land Use-Based Adaptation Against Emerging Wildfires**

Tasnim Tarannum Isaba, University of Utah

Divya Chandrasekhar, University of Utah

Donovan Finn, Stony Brook University

Santina Contreras, University of Southern California

#### **A Collaborative Framework for Complex Systems Analysis: Lessons From Uganda**

Erica Gralla, The George Washington University

Jarrold Goentzel, Massachusetts Institute of Technology

#### **Hierarchies of Affectedness After Disasters**

Kate Brady, University of Melbourne

Lisa Gibbs, University of Melbourne

Louise Harms, University of Melbourne

#### **Chicory: Roots, Resistance, and Resilience**

Jennifer Lawrence, University of Virginia

#### **Resilience, Climate Adaptation, Sustainability, and Social Equity as Convergent Community Planning Goals**

Emily H. Walpole, National Institute of Standards and Technology

Jennifer Helgeson, National Institute of Standards and Technology

Christopher Clavin, National Institute of Standards and Technology

Matthew Malecha, Texas A&M University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **TRACK 3: EMERGENCY MANAGEMENT**

#### **LEARNING FROM EVACUATION AND RESPONSE EXPERIENCES**

1:15 to 2:45 p.m. MDT

Location: Centennial E

#### **MODERATOR:**

**Jennifer Trivedi, University of Delaware**

#### **LIGHTNING TALKS:**

#### **Examining Evacuation Decisions of People Experiencing Homelessness During Natural Disasters**

Andrea Ramos, Florida Atlantic University

#### **Household Responses to 2018 Mati Wildfire: Evacuation Logistics and Preparation Time Estimations**

Mohammad Rayeedul Kalam Siam, Oregon State University

Brian M. Staes, Oregon State University

Michael K. Lindell, Oregon State University

Haizhong Wang, Oregon State University

#### **Examining the Challenges of Evacuation to Special Needs Shelters During Hurricane Irma**

Rebecca Entress, University of Central Florida

Ratna Okhai, University of Central Florida

Claire Knox, University of Central Florida

#### **A Closer Look Into Hurricane Evacuation Decision-Making Among Emergency Managers in Florida**

Sara Iman, University of Central Florida

Yue Ge, University of Central Florida

Daniel Klenow, North Dakota State University

Amanda Savitt, Argonne National Laboratory

Pamela Murray-Tuite, Clemson University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Environment, Society, and Technology: Learning From Earthquake Early Warning**

Elizabeth Reddy, Colorado School of Mines

### **Invisible Benefits of Earthquake Early Warning for Water Utilities**

Yolanda Lin, University of New Mexico

Sara McBride, U.S. Geological Survey

Madison Cox, University of New Mexico

### **Predicting Spatial and Temporal Route-Section Choices During Large-Scale Disaster Evacuations**

Xiangyu "Dale" Li, Oklahoma State University

Huaxia Wang, Oklahoma State University

Jikui Zhao, Oklahoma State University

## **TRACK 4: NEW APPROACHES AND MODELS IN DISASTER RESEARCH ADVANCEMENTS IN MODELING PHYSICAL IMPACTS OF DISASTER**

1:15 to 2:45 p.m. MDT

Location: Centennial F

### **MODERATOR:**

**Victor Wang, Chapman University**

### **LIGHTNING TALKS:**

### **Planning for Future Disasters: An Interdisciplinary Modeling Approach to Project Hurricane-Induced Debris**

Mitchell Meads, Texas A&M University at Galveston

Catalina Gonzalez-Dueñas, University College London

Benjamin Pachev, University of Texas at Austin

Kooshan Amini, Rice University

Wesley Highfield, Texas A&M University at Galveston

Jamie Padgett, Rice University



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Application and Comparison of Imaging Techniques for Data-Driven Disaster Debris Quantification**

Jasmine Bekkaye, Louisiana State University

Navid Jafari, Louisiana State University

### **Image Feature Classifier for School Infrastructure in Large-Scale Earthquake Vulnerability Analysis**

Jikun Liu, Texas A&M University

Tarea Karunaratne, New York University

Cayden Chen, New York University

Eva Yao, New York University

### **Quantifying Tornado Impacts on U.S. Critical Facilities**

Nico de Toledo, National Institute of Standards and Technology

Marc Levitan, National Institute of Standards and Technology

Jamil Malik, National Institute of Standards and Technology

Warren Stewart, National Institute of Standards and Technology

Katherine J. Johnson, National Institute of Standards and Technology

P. Shane Crawford, Federal Emergency Management Agency

Dominique Paige, National Institute of Standards and Technology

### **Geometric Parameterization of Sedimentary Basins for Site Response Analysis and Modeling**

Chukwuebuka Nweke, University of Southern California

Rashid Shams, University of Southern California

Grace Parker, U.S. Geological Survey

### **Critical Infrastructure Resilience During Hurricanes Harvey and Irma Using Inoperability Model**

Shahnawaz Rafi, Florida International University

Joost R. Santos, The George Washington University

Pallab Mozumder, Florida International University





## SESSIONS AND EVENTS: THURSDAY, JULY 13

### TRACK 5: RECOVERY AND RESILIENCE INITIATIVES

#### LESSONS FOR EQUITABLE RESOURCE DISTRIBUTION AND RESILIENCE

1:15 to 2:45 p.m. MDT

Location: Spruce

#### MODERATOR:

**Rodrigo Costa, University of Waterloo**

#### LIGHTNING TALKS:

##### **Florida's Failing Property Insurance Market: Actuarial Soundness, Policyholder Affordability, and Legal Handwringing**

Maria Ilcheva, Florida International University

Howard Frank, Florida International University

##### **Valuing Community-Based Resilience: Modeling Choices in Estimating Willingness to Pay**

Wesley Wehde, Texas Tech University

##### **Promoting Resilience Among Asian American-Owned Small Businesses in New York City**

Sua Kim, University of Utah

Divya Chandrasekhar, University of Utah

##### **Knowledge and Barriers to Community Resources Post-Disaster to Build Canadians' Entrepreneurial Resilience**

Haorui Wu, Dalhousie University

Kyle Breen, Dalhousie University

Meghann Coleman, MindFrame Connect

Erin Wynn, MindFrame Connect

Luke DeCoste, MindFrame Connect



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Disruptions From Wildfire Smoke: Vulnerabilities in Local Economies and Disadvantaged Communities**

Jason Vargo, Federal Reserve Bank of San Francisco

Brooke Lappe, Emory University

### **Disaster Impacts on Urban-Rural Connectivity for Collective Resilience**

Namita Poudel Bhurtel, Keio University

### BREAK

2:45 to 3:15 p.m. MDT

## **TRACK 1: TRAINING AND NETWORKING**

### **COASTLINES AND PEOPLE HUBS AND RECENT CAREER AWARDS**

3:15 to 4:45 p.m. MDT

Location: Interlocken C

Please join this session to learn more about the National Science Foundation-funded hubs supported by the Coastlines and People (CoPe) program and hear from recent Faculty Early Career Development (CAREER) award recipients. Panelists will share updates regarding the activities of the multi-institutional coastal research hubs and how they are developing new knowledge about interactions among natural, built, and social systems in coastal areas. CAREER awardees will provide advice to prospective applicants and updates on their projects, which address pressing disaster resilience questions with innovative and equity-driven approaches.



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### MODERATOR:

**Walter Peacock, Texas A&M University**

### PRESENTATIONS:

#### **Evaluating Accessibility After a Cascadia Subduction Zone Earthquake and Tsunami**

Dan Cox, Oregon State University

Amina Meselhe, Oregon State University

Dylan Sanderson, Oregon State University

Jenna Tilt, Oregon State University

#### **Characterizing Tradeoffs of Coastal Adaptation Strategies Using Value-Informed Objectives**

Laura Geronimo, Rutgers University

#### **CAREER: Multiscale Probabilistic Characterization of Seismic Site Response in Highly Uncertain Environments**

Ashly Cabas, North Carolina State University

#### **CAREER: Affordable Versus Vacation Housing Resilience: Mechanisms that Shape Housing Vulnerability and Recovery in Coastal Communities**

Sara Hamideh, Stony Brook University

#### **CAREER: Estimating and Addressing Disaster Survivors' Unmet Needs: A Social Vulnerability and Social Infrastructure Approach**

Michelle Annette Meyer, Texas A&M University

### **TRACK 2: RISK AND RESILIENCE IN A CHANGING CLIMATE ECONOMIC AND SOCIAL PERSPECTIVES ON RESILIENCE**

3:15 to 4:45 p.m. MDT

Location: Interlocken D



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### MODERATOR:

**Christina Gore, National Institute of Standards and Technology**

### PRESENTATIONS:

#### **Natural Disasters and Mortgage Risk in the Federal Housing Administration**

Michael Craig, U.S. Department of Housing and Urban Development

Adam Hoffberg, U.S. Department of Housing and Urban Development

#### **Exploring Household-Level Economic Decision-Making and Disaster Mitigation Behaviors**

Dontá Council, Federal Reserve Bank of Atlanta

Leah Cabrera, Georgia Tech Research Institute

#### **Assessing Social Vulnerability to Landslides in Puerto Rico**

Jocelyn West, Natural Hazards Center

Luis Alexis Rodríguez-Cruz, U.S. Department of Agriculture

Stephen Hughes, University of Puerto Rico at Mayagüez

#### **Seismic Building Code Implementation in Nepal: Masons Struggle for Respect and Pay**

Rebekah Paci-Green, Western Washington University

Nisha Shrestha, National Society for Earthquake Technology

Surya Shrestha, National Society for Earthquake Technology

Suman Pradan, National Society for Earthquake Technology

### **TRACK 3: EMERGENCY MANAGEMENT**

#### **EQUITABLE EMERGENCY COMMUNICATION**

3:15 to 4:45 p.m. MDT

Location: Centennial E

### MODERATOR:

**Kaila Witkowski, Florida Atlantic University**



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### PRESENTATIONS:

#### **Leveraging Social Media Data for Enhancing Wildfire Situational Awareness**

Zihui Ma, University of Maryland

Lingyao Li, University of Michigan

Yubai Yuan, Pennsylvania State University

Gregory Baecher, University of Maryland

#### **Behavioral Responses to the Southwest Puerto Rico Earthquake Sequence: Information Seeking and Decision-Making**

Jenniffer Santos-Hernández, University of Puerto Rico Río Piedras

Sara McBride, U.S. Geological Survey

Nnenia Campbell, Natural Hazards Center

Lorna Jaramillo Nieves, University of Puerto Rico Río Piedras

#### **Socially Equitable Access to Crisis Information Provided by Local Offices of Emergency Management**

Brittany Haupt, Virginia Commonwealth University

Jason Rivera, City University of New York

Claire Knox, University of Central Florida

#### **Using Communication Best Practices to Develop Cascadia Earthquake Preparedness Workshops for Spanish Speakers**

Carson MacPherson-Krutsky, Boise State University

Brittany Brand, Boise State University

Michael K. Lindell, Boise State University

#### **Communication Through Geohazard Situational Awareness Bulletins: Lessons Learned**

Dave Gauthier, BGC Engineering

Carie-Ann Lau, BGC Engineering

Kris Holm, BGC Engineering

Hazel Wong, BGC Engineering

Patrick Grover, BGC Engineering



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Wireless Emergency Alerts and Organizational Response: Instructing and Adjusting Information in Alerts**

Lauren B. Cain, State University of New York at Albany

Michele K. Olson, State University of New York at Albany

Nicholas Waugh, State University of New York at Albany

Jeannette Sutton, State University of New York at Albany

### **TRACK 4: NEW APPROACHES AND MODELS IN DISASTER RESEARCH INNOVATIONS IN DISASTER RISK AND IMPACTS ASSESSMENT**

3:15 to 4:45 p.m. MDT

Location: Centennial F

#### **MODERATOR:**

**Louise Comfort, University of California, Berkeley**

#### **PRESENTATIONS:**

##### **Assessment of Wind Environment for Pedestrian Safety**

Sungsu Lee, Chungbuk National University

##### **Risk Mapping of Interdependent Social and Physical Infrastructure Networks for Multi-Hazard Events**

Khondhaker Al Momin, University of Oklahoma

Arif Mohaimin Sadri, University of Oklahoma

Kristin Olofsson, Oklahoma State University

David Reed, University of Science and Arts of Oklahoma

##### **Asymmetric Urbanized River Basins: Tempo-Spatial Analysis of Transformed Land Use and Population**

Takumi Yamada, The University of Tokyo

Kensuke Otsuyama, The University of Tokyo

U Hiroi, The University of Tokyo



## SESSIONS AND EVENTS: THURSDAY, JULY 13

### **Measuring Post-Disaster Accessibility to Essential Services: Availability, Adequacy, Acceptability, and Proximity Dimensions**

S. Amin Enderami, University of Kansas

Elaina Sutley, University of Kansas

Jennifer Helgeson, National Institute of Standards and Technology

John van de Lindt, Colorado State University

Leonardo Dueñas-Osorio, Rice University

Maria Watson, University of Florida

### **Multi-Hazard Risk Assessment in Small Island Developing States: Case Study of Fiji's Disaster Management System**

Ratu Tevita Rarokolutu, University of the South Pacific

Rahul Ravneel Prasad, University of the South Pacific

### **Predicting the Spatial Distribution of Damage to Built Environments in Wildfire Events**

Hussam Mahmoud, Colorado State University

Akshat Chulawat, Colorado State University

## **TRACK 5: RECOVERY AND RESILIENCE INITIATIVES**

### **ASSESSING EQUITY IN MITIGATION AND RECOVERY ASSISTANCE**

3:15 to 4:45 p.m. MDT

Location: Spruce

#### **MODERATOR:**

**Kristopher Young, University of Utah**

#### **PRESENTATIONS:**

### **Challenges and Impacts of Buyout Programs in Eastern North Carolina**

Kayode Adeniji, East Carolina University

Anuradha Mukherji, East Carolina University

Scott Curtis, The Citadel



## SESSIONS AND EVENTS: THURSDAY, JULY 13

Jamie Kruse, East Carolina University

Jennifer Helgeson, National Institute of Standards and Technology

Ausmita Ghosh, East Carolina University

Meghan Millea, East Carolina University

### **Was Federal Emergency Management Agency Assistance Equitable After the 2015 Dam Failures in Columbia, South Carolina?**

Ciara Horne, The Bill Anderson Fund

### **Opportunities and Challenges of Equitable Flood Mitigation Investment in Charleston, South Carolina**

Farinaz Motlagh, Stony Brook University

Sara Hamideh, Stony Brook University

### **A Systematic Approach to Identifying and Analyzing Federal (Disaster) Funding Programs**

Maria Watson, University of Florida

Farinaz Motlagh, Stony Brook University

### **Post-Hurricane Recovery and Relocation of Local Businesses in Puerto Rico**

Divya Chandrasekhar, University of Utah

N. Emel Ganapati, Florida International University

Ivis García, Texas A&M University

Robert Olshanksy, University of Illinois Urbana-Champaign

Mark Padilla, Florida International University

Tasnim Isaba, University of Utah

————— BREAK —————

4:45 to 5:00 p.m. MDT





## SESSIONS AND EVENTS: THURSDAY, JULY 13

### CLOSING DISCUSSION AND AGENDA SETTING

5:00 to 5:30 p.m. MDT

Location: Centennial Ballroom

Please join us for this closing session of the 2023 Researchers Meeting. The chair and co-chair of this year's meeting will offer a summary of key contributions, share opportunities for publishing research papers, and gather ideas for the next Researchers Meeting, which is scheduled for July 17 to 18, 2024, in Broomfield, Colorado.

#### SPEAKERS:

**Sara Hamideh, Stony Brook University**

Chair, Researchers Meeting Organizing Committee

**Sabine Loos, University of Michigan**

Co-Chair, Researchers Meeting Organizing Committee

— ADJOURN —

5:30 p.m. MDT



# RESEARCHERS MEETING ABSTRACTS

You can access all Researchers Meeting abstracts by scanning the QR code below or by visiting the Natural Hazards Center website at: [hazards.colorado.edu/workshop/2023/abstract/index/researchers-meeting](https://hazards.colorado.edu/workshop/2023/abstract/index/researchers-meeting).

If you have questions regarding any of the work presented at this year's Researchers Meeting, you can find the email addresses for all registered participants at the end of this program.





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For more information or to join, please visit:

[isa-sociology.org/en/research-networks/research-committees/rc39-sociology-of-disasters](https://isa-sociology.org/en/research-networks/research-committees/rc39-sociology-of-disasters).



# HAZARDS AND DISASTER JOURNALS

The Natural Hazards Center has compiled the following list of hazards and disaster, risk, and climate focused journals, including the title, link to the journal, and five-year impact factor.\*

The most up to date list and links to journal websites can be accessed online at:

[hazards.colorado.edu/resources/hazards-and-disaster-journals](https://hazards.colorado.edu/resources/hazards-and-disaster-journals).

JOURNAL NAME	Five-Year Impact Factor
American Journal of Disaster Medicine	n/a
Asian Journal of Environment and Disaster Management	n/a
Australasian Journal of Disaster and Trauma Studies	n/a
Australian Journal of Emergency Management	n/a
Climatic Change	4.743
Climate and Development	4.28
Climate Risk Management	4.09
Critical Disaster Studies	n/a
Disaster Medicine and Public Health Preparedness	1.385
Disaster Prevention and Management: An International Journal	1.521
Disasters	2.641
Earthquake Spectra	3.03
Ecology and Society	4.403
Economics of Disasters and Climate Change	n/a
Emergency Medicine Journal	2.794
Environment and Behavior	6.222
Environmental Hazards	1.827
Environmental Management	3.266
Environmental Sociology	.78
European Journal of Emergency Medicine	2.799
GeoHazards	n/a
Geomatics, Natural Hazards and Risk	3.528
Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards	3.868
Global Environmental Change: Human and Policy Dimensions	9.523
Health in Emergencies & Disasters	n/a
Human and Ecological Risk Assessment: An International Journal	5.19



JOURNAL NAME	Five-Year Impact Factor
International Journal of Business Continuity and Risk Management	n/a
International Journal of Climate Change Strategies and Management	2.645
International Journal of Crisis Communication	n/a
International Journal of Disaster Resilience in the Built Environment	.18
International Journal of Disaster Response and Emergency Management	n/a
International Journal of Disaster Risk Reduction	4.32
International Journal of Disaster Risk Science	3.727
International Journal of Earthquake and Impact Engineering	n/a
International Journal of Earthquake Engineering and Hazard Mitigation	n/a
International Journal of Emergency Management	.13
International Journal of Emergency Services	.6
International Journal of Mass Emergencies and Disasters	n/a
International Journal of Natural Disasters & Health Security	n/a
International Journal of Wildland Fire	3.2
Jamba: Journal of Disaster Risk Studies	.82
Journal of Business Continuity & Emergency Planning	n/a
Journal of Climate	5.148
Journal of Climate Change and Health	n/a
Journal of Contingencies and Crisis Management	4.391
Journal of Critical Incident Analysis	n/a
Journal of Disaster Research	.24
Journal of Disaster Studies	n/a
Journal of Emergency Management	n/a
Journal of Environmental Management	6.789
Journal of Extreme Events	n/a
Journal of Flood Risk Management	3.884
Journal of Geography & Natural Disasters	n/a
Journal of Homeland Security and Emergency Management	1.258
Journal of Integrated Disaster Risk Management	n/a
Journal of International Crisis and Risk Communication Research	n/a
Journal of Natural Disaster Science	n/a
Journal of Risk Research	2.583
Journal of Seismology and Earthquake Engineering	n/a
Journal of Traumatic Stress	3.476
Journal of Volcanology and Geothermal Research	2.789
Landslides	6.578
Natural Hazards	3.102
Natural Hazards and Earth System Sciences	4.345
Natural Hazards Research	n/a
Natural Hazards Review	3.169
Nature Climate Change	25.29

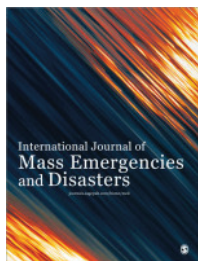


JOURNAL NAME	Five-Year Impact Factor
npj Natural Hazards	n/a
Population and Environment	3.537
Pracademic Affairs	n/a
Prehospital and Disaster Medicine	2.04
Progress in Disaster Science	n/a
Psychological Trauma: Theory, Research, Practice, and Policy	3.226
Risk Analysis	4
Risk, Hazards, & Crisis in Public Policy	.86
Science of Tsunami Hazards	n/a
Seismica	n/a
Traumatology	n/a
Weather	1.596
Weather, Climate, and Society	2.746

\*Impact factors measure the average number of yearly citations of articles published in each journal. This score is used to determine the relative importance of a journal within its field, with higher scores indicating a stronger impact. Impact factors were found using Journal Citation Reports. Journals with a n/a did not have an impact factor listed. This list was last updated on March 7, 2023. Updates or suggested journal additions should be sent to:

[hazctr@colorado.edu](mailto:hazctr@colorado.edu).





## International Journal of Mass Emergencies & Disasters

eISSN: 27535703 | ISSN: 02807270



Created in 1983 by the International Sociological Association's Research Committee on the Sociology of Disasters ([ISA RC39](#)), the *International Journal of Mass Emergencies and Disasters* has the distinction of being one of the oldest and most respected disaster science journals of the world, focused on the social and behavioural aspects of relatively sudden collective stress events be they natural, technological or human induced, typically referred to as disasters or mass emergencies. Since its transition to SAGE Publishing in 2023 it is being relaunched with revisions to the 'Aims and Scope' and an expansion of the Editorial Board members, reflecting the changing definitions of hazards and disasters during these current times and the growing interdisciplinarity of this field.

### Journal URL:

<https://us.sagepub.com/en-us/nam/international-journal-of-mass-emergencies-disasters/journal203777>  
<http://journals.sagepub.com/home/med>

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# GLOBAL HAZARDS AND DISASTER RESEARCH CENTERS LIST AND MAP

In an effort to increase collaboration and access to emerging research, the Natural Hazards Center has compiled information on more than 375 academic hazards and disaster research centers, institutes, and laboratories around the world. This resource includes a comprehensive list of centers, organized by geographic regions, doing work on a wide range of disciplinary and interdisciplinary research in the hazards and disaster field.



The interactive web map and associated published data are available at:

[hazards.colorado.edu/resources/research-centers](https://hazards.colorado.edu/resources/research-centers).

For further information, please see: Hines, Emmanuelle, Mason Mathews, and Lori Peek. 2020. "Global List and Interactive Web Map of University-Based Hazards and Disaster Research Centers." *Natural Hazards Review* 21(2), doi.org/10.1061/(ASCE)NH.1527-6996.0000371.

If you have questions about this project or would like to add your academic research center to the website, please contact Lori Peek at [lori.peek@colorado.edu](mailto:lori.peek@colorado.edu).

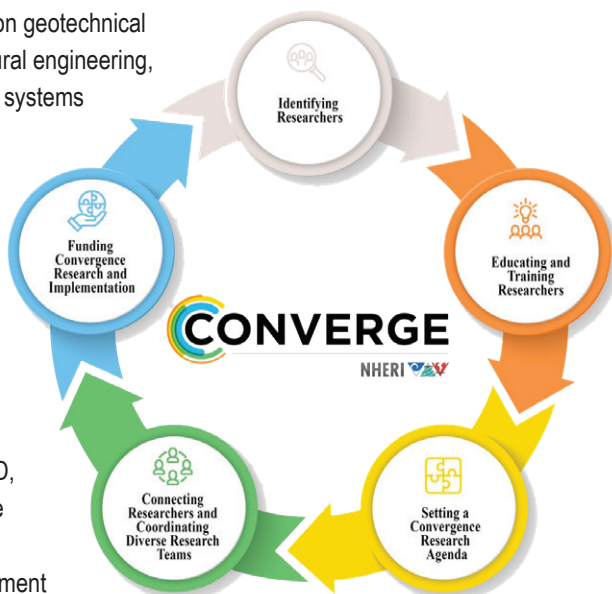


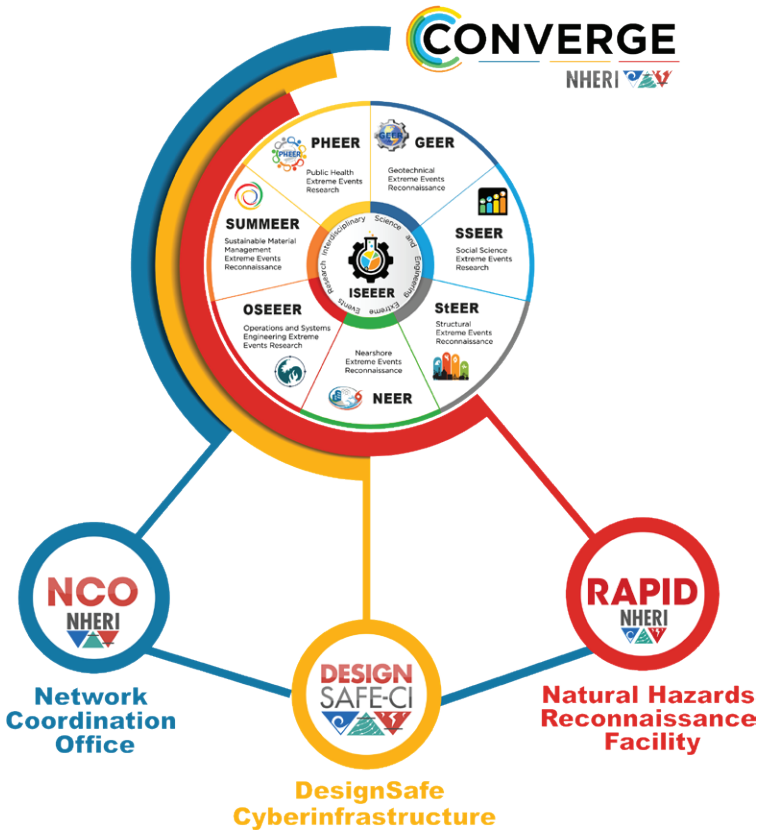
# CONVERGE

The National Science Foundation-supported CONVERGE facility was established in 2018 as the first social science-led component of the Natural Hazards Engineering Research Infrastructure (NHERI) for the nation. CONVERGE, which is headquartered at the Natural Hazards Center, brings together networks of hazards and disaster researchers across disciplinary boundaries to advance research that is problem-focused and solutions-based.

CONVERGE supports research that is conceptually integrative by: (a) identifying researchers; (b) educating and training researchers; (c) setting a community-driven convergence research agenda; (d) connecting researchers and coordinating functionally and demographically diverse research teams; and (e) supporting and funding convergence research, data collection, data sharing, and solutions implementation.

CONVERGE serves as the leadership hub for eight Extreme Events Reconnaissance and Research (EER) networks focused on geotechnical engineering, social sciences, structural engineering, nearshore research, operations and systems engineering, sustainable materials management, public health, and interdisciplinary research. This EER ecosystem connects and coordinates disciplinary communities and encourages interdisciplinary data collection and information sharing. The EERs also partner with other NHERI facilities such as DesignSafe, RAPID, and the Network Coordinating Office to access reconnaissance tools and cyberinfrastructure for data management and integration.





CONVERGE also offers free online resources including a series of research check sheets that help prepare students and others new to the field to conduct hazards and disaster research. CONVERGE has developed 11 interactive training modules as well. These web-based trainings cover a range of foundational and advanced topics in hazards and disaster research. The modules take an all-hazards approach and draw on case examples from natural hazards, technological disasters, public health emergencies, and willful human-caused disasters. Each module takes between 30 and 60 minutes to complete. At the end of the module, users can take a 10-question quiz worth one contact hour of emergency management training through a partnership with the International Association of Emergency Managers (IAEM) certification program.

More information on CONVERGE is available at:  
[converge.colorado.edu](https://converge.colorado.edu).





# SUBSCRIPTION INFORMATION

Scan the QR codes below to subscribe to Natural Hazards Center and CONVERGE publications, activities, and updates.



Natural Hazards Center



CONVERGE

# RESEARCHERS MEETING SURVEY



We hope you will share your feedback so we can continue to improve the Researchers Meeting!

Please follow this link or scan the QR code to complete a short survey:

[hazards.colorado.edu/workshop/2023/researchers-meeting-survey](https://hazards.colorado.edu/workshop/2023/researchers-meeting-survey).



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# SAVE THE DATES!

## 49TH ANNUAL NATURAL HAZARDS WORKSHOP

Sunday, July 14 to Wednesday, July 17, 2024

### RESEARCHERS MEETING

Wednesday, July 17 to Thursday, July 18, 2024

### PRACTITIONERS MEETING

Thursday, July 18, 2024

OMNI INTERLOCKEN HOTEL || BROOMFIELD, COLORADO

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## 50TH ANNUAL NATURAL HAZARDS WORKSHOP

Sunday, July 13 to Wednesday, July 16, 2025

### RESEARCHERS MEETING

Wednesday, July 16 to Thursday, July 17, 2025

### PRACTITIONERS MEETING

Thursday, July 17, 2025

OMNI INTERLOCKEN HOTEL || BROOMFIELD, COLORADO



# ACKNOWLEDGMENTS

The Natural Hazards Center and CONVERGE teams and the leadership of the International Sociological Association Research Committee on Disasters (ISA-RC39) are pleased to convene the 2023 Researchers Meeting. We are especially grateful to be back in person again this year, and we thank all those who are attending this year's meeting.

## SPECIAL THANKS

The Natural Hazards Center, CONVERGE, and the ISA-RC39 wish to offer special thanks to the following people and organizations.

- Sara Hamideh and Sabine Loos who served as chair and co-chair, respectively, of this year's Researchers Meeting. They have worked together in this capacity—always with great exuberance, intellect, and passion—since 2020. They have taken the meeting in exciting new directions, and the entire research community has benefited from their leadership.
- We are grateful for all of the other members of the Researchers Meeting Organizing Committee. Rodrigo Costa and Alyssa Provencio served as lead session organizers this year. We also gratefully acknowledge the service of Kyle Breen, Paula Bürgi, Dontá Council, Oronde Drakes, Alexis Merdjanoff, Robert Soden, Alyssa Stansfield, Jennifer Trivedi, Chandler Wilkins, and Kristopher Young. The dedicated members of the organizing committee read, evaluated, and edited the abstracts and helped to assemble an intellectually engaging final program.
- We thank the student volunteers, who committed their time and talent to ensure the success of both the Natural Hazards Workshop and Researchers Meeting.
- Bill Lovekamp, past ISA-RC39 president, has long supported this meeting. We are grateful for his guidance and thank him for his leadership and longstanding service.
- Finally, we thank the program directors from the National Science Foundation who support science, engineering, and interdisciplinary research efforts in hazards and disasters. We are so grateful that they recognize the value in bringing together researchers to share our recent findings and to push the field forward.



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## FUNDING SUPPORT



The 2023 Researchers Meeting is made possible with funding support from the National Science Foundation (NSF), Division of Civil, Mechanical, and Manufacturing Innovation (CMMI) (Award #1841338 and Award #1635593). Any opinions, findings, conclusions, or recommendations expressed in this meeting are those of the participants and do not necessarily reflect the views of the NSF.





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