# 2024 RESEARCHERS MEETING

July 17-18, 2024

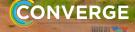
Omni Interlocken Hotel Broomfield, Colorado











# RESEARCHERS MFFTING

JULY 17 - 18, 2024 OMNI INTERLOCKEN HOTEL BROOMFIELD, COLORADO

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.















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**

On behalf of the Researchers Meeting Organizing Committee, we are so pleased to welcome you to the Omni Interlocken Hotel in Broomfield, Colorado.

First established in 1997, the Researchers Meeting has long served as a gathering place for hazards and disaster researchers who wish to share their scholarship with other professionals in the field. This year, we received more than 240 submissions for presentation from students, early career scholars, and well-established researchers. The Organizing Committee carefully reviewed each submission and assembled a dynamic program centered on the following key research areas:

- Hazard Mitigation and Preparedness
- Community Health and Well-Being
- **Emergency Management**
- Equity and Empowerment
- Data-Driven Risk Management
- Disaster Recovery and Resilience
- Cross-Sector Collaboration and Stakeholder Engagement

We hope you will join us for the presentations, roundtable discussions, and other networking opportunities that we have planned for this year's meeting. We look forward to learning from you as we work together to advance hazards research and disaster science.

Rodrigo Costa, 2024 Researchers Meeting Chair University of Waterloo

Alyssa Provencio, 2024 Researchers Meeting Chair University of Central Oklahoma



### WIRELESS INTERNET ACCESS

Wireless internet is available in all 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: 2024Workshop

### **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 ones you can 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/2024/RESEARCHERS-MEETING/



# 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 staff members at the registration desk so appropriate action can be taken.

### COVID-19 SAFFTY PROTOCOLS

We are excited to host another in-person Researchers Meeting here in Broomfield, Colorado. Please know that while we are thrilled to be together, 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:

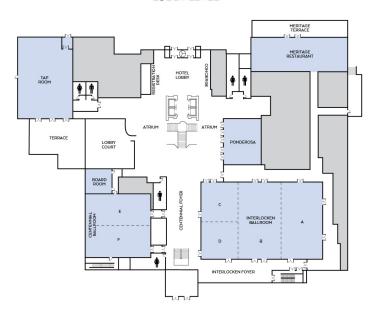
- Ensure your vaccinations are current before traveling to the Researchers Meeting.
- Take a COVID-19 test at least 24 hours before traveling to the Researchers Meeting.
- Do not attend any sessions or events if you are COVID-19 positive or otherwise feeling ill.
- Consider wearing a mask in all public areas, maintain a reasonable distance from others whenever possible, and frequently sanitize your hands.

Complimentary Natural Hazards Center masks can be picked up at the registration table as needed. Hand sanitizer is available in each meeting room.

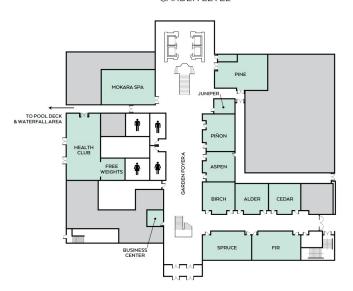


# **OMNI INTERLOCKEN HOTEL**

LOBBY LEVEL



#### GARDEN LEVEL





WEDNESDAY, JULY 17
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 2:20 p.m. MDT
Location: Centennial Ballroom
Please join us for this opening session for the 2024 Researchers Meeting, organized by the <a href="International Sociological Association Research Committee on Disasters">International Sociological Association Research Committee on Disasters</a> (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 the program and organization of the sessions. In addition, ISA-RC39 leadership will share ideas for getting involved in the committee and encourage presenters to publish their work in the <a href="International Journal of Mass Emergencies and Disasters">International Journal of Mass Emergencies and Disasters</a> .
SPEAKERS:
Michèle Companion, University of Colorado Colorado Springs President, ISA-RC39
Rodrigo Costa, University of Waterloo 2024 Researchers Meeting Chair
Alyssa Provencio, University of Central Oklahoma 2024 Researchers Meeting Chair
BREAK



# TRACK 1: HAZARD MITIGATION AND PREPAREDNESS INCLUSIVE COMMUNITY HAZARD MITIGATION AND PREPAREDNESS

2:30 to 4:00 p.m. MDT Location: Interlocken A

### **MODERATOR:**

Samantha Montano, Massachusetts Maritime Academy

#### PRESENTATIONS:

#### Changing Narratives to Encourage Civic Participation in Disaster Preparedness

Manomita Das, Massey University Julia Becker, Massey University Emma Hudson-Doyle, Massey University Sara K. McBride, U.S. Geological Survey

# Roles and Responsibilities of Community Leaders in Disaster-Resilient Communities

Li-ju Jang, National Pingtung University of Science and Technology Yi-lung Yeh, National Pingtung University of Science and Technology Zhi-mou Chen, National Pingtung University of Science and Technology

# Effects of Migration-Driven Diversification on Building Disaster Resilience in Toyama, Japan

Szymon Parzniewski, Dalhousie University

# Under the Radar: How People Experiencing Homelessness Sense Impending Disasters

Andrea Ramos, Florida International University



#### Challenges to Solutions: Community-Driven Flood Mitigation in San Francisco Bay Area

Hannah Melville-Rea, Stanford University

Makena Wong, OneShoreline

Jenny Suckale, Stanford University

Gabrielle Wong-Parodi, Stanford University

### TRACK 2: COMMUNITY HEALTH AND WELL-BEING

### MUITIFACETED APPROACHES TO COVID-19 CHAILENGES

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

Location: Interlocken B

### MODERATOR:

Kaila Witkowski, Florida Atlantic University

#### PRESENTATIONS:

#### Policies for Sudden Demand Surges in Medical Supplies: Healthcare Supply Chain **Impacts**

Erica Gralla, The George Washington University

Joseph Barbera, The George Washington University

#### Social Networks and Mental Health Resilience for Parents During Pandemic School Closures

Shawna Bendeck, Colorado State University

#### Experiences of Companion Animal Guardians With (Dis)abilities During COVID-19: A **Comparative Study**

Siyu Ru, Dalhousie University

Haorui Wu, Dalhousie University

#### Virtual Refuge and Curbside Support: Delaware Public Libraries, Their Communities, and COVID-19

Cornelia Posch, University of Delaware



### TRACK 3: EMERGENCY MANAGEMENT

### OPTIMIZING EVACUATION DECISIONS

2:30 to 4:00 p.m. MDT Location: Interlocken C

#### MODERATOR:

Adam Andresen, University of Delaware

#### PRESENTATIONS:

# Heterogeneity of Households' Risk Assessments in Affecting Hurricane Evacuation Decisions

InYoung Dulick, Jacksonville State University

Shih-Kai (Sky) Huang, Jacksonville State University

Yuran Sun, University of Florida

Xilei Zhao, University of Florida

Michael Lindell, University of Washington

# Enhancing Evacuation Strategies: Data-Driven Modeling in Agent-Based Simulations for Efficient Disaster Response

Seunghan Lee, Mississippi State University

Bates Bennett, Mississippi State University

# A Comparative Study of Evacuation Choice Behavior During Hurricanes Katrina and Ida

Ruijie Bian, Louisiana Transportation Research Center

Jiayun Shen, Clemson University

Pamela Murray-Tuite, Clemson University

Yunpeng Han, Louisiana State University

Xiangyu Meng, Louisiana State University

#### Understanding Evacuation Zone Awareness in High-Risk Disaster Areas

Kayley Estes, University of California, Irvine

Dana Rose Garfin, University of California, Los Angeles

E. Alison Holman, University of California, Irvine



Roxane Cohen Silver, University of California, Irvine

#### Travel Demand for Safety: Price and Income Elasticity of Hurricane Evacuation **Behavior**

Fan Jiang, Shanghai University of International Business and Economics

Sisi Meng, University of Notre Dame

Chengxue Yao, Shanghai University of International Business and Economics

Nafisa Halim, Boston University

Pallab Mozumder, Florida International University

# TRACK 4: EOUITY AND EMPOWERMENT

CROSS-GENERATIONAL PERSPECTIVES

2:30 to 4:00 p.m. MDT Location: Interlocken D

### MODERATOR:

Yiwen Wu, University of Kansas

#### PRESENTATIONS:

#### What Kids Can Do: Children's Helping Behaviors in the COVID-19 Pandemic

Lori Peek, Natural Hazards Center

Alice Fothergill, University of Vermont

Zoe Lefkowitz, Natural Hazards Center

Melissa Villarreal, Natural Hazards Center

#### College Students' Knowledge, Experience, and Risk Perception Regarding Tornadic **Events**

Amy Hyman, Arkansas State University Joseph Richmond, Arkansas State University

#### College Students' Utilization of Warning Sources and Protective Actions During **Tornadic Events**

Joseph Richmond, Arkansas State University

Amy Hyman, Arkansas State University



### TRACK 5: DATA-DRIVEN RISK MANAGEMENT

LEVERAGING ALAND DATA ANALYTICS: APPLICATIONS AND FUTURE DIRECTIONS

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

Location: Ponderosa

#### MODERATOR:

Rodrigo Costa, University of Waterloo

#### PRESENTATIONS:

#### Opportunities and Challenges for Incorporating Al in Emergency and Crisis Response

Kaila Witkowski, Florida Atlantic University

Ratna Okhai, University of South Florida

Stephen Neely, University of South Florida

#### Geo-Knowledge-Guided Artificial Intelligence for Extracting Location Descriptions From Disaster-Related Social Media Messages

Yingjie Hu, State University of New York at Buffalo

Gengchen Mai, University of Georgia

Chris Cundy, Stanford University

Kristy Choi, Stanford University

Ni Lao, Google, Inc.

Wei Liu, State University of New York at Buffalo

Gaurish Lakhanpal, Stevenson High School

Ryan Zhou, State University of New York at Buffalo

Kenneth Joseph, State University of New York at Buffalo

#### A Hybrid Machine Learning Approach for Identifying Flood Debris Drivers and Generation

Jasmine Bekkaye, Louisiana State University

Navid Jafari, Louisiana State University



#### Al Integration in Disaster Management: Workshop Insights on Opportunities and Challenges

Sophia Harris, University of Colorado Boulder

Theodora Chaspari, University of Colorado Boulder

Sharon Chu, University of Florida

Denise Simmons, University of Florida

Michelle Meyer, Texas A&M University

Amir Behzadan, University of Colorado Boulder

#### The Coming Storm: Making Decision Support Tools Relevant to Emergency **Managers**

Samuel Adams, University of Rhode Island

Austin Becker, University of Rhode Island

### TRACK 6: DISASTER RECOVERY AND RESILIENCE

### RURAL READINESS AND ADAPTATION

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

Location: Centennial Ballroom

### MODERATOR.

Kevin Smiley, Louisiana State University

#### PRESENTATIONS:

#### Vulnerability and Recovery of Small Farms Following Windstorms

Gabriela Yáñez González, University of Nebraska-Lincoln

Christine Wittich, University of Nebraska-Lincoln

Maria Watson, University of Florida

Rebekka Dudensing, Texas A&M University

Steven Klose, Texas A&M University

Dean McCorkle, Texas A&M University

#### Computer Simulation to Support Disaster Preparedness in Rural Communities

Kristina Kintziger, University of Nebraska Medical Center



Tom Berg, University of Tennessee, Knoxville

Tracey Stansberry, University of Tennessee, Knoxville

Scott Lawson, University of Tennessee, Knoxville

Gerald Jones, Jr., University of Tennessee, Knoxville

Liem Tran, University of Tennessee, Knoxville

#### Consequences of Buyouts as a Response to Flood Events in Rural Communities

Ke'Ziyah Williamson, South Carolina Sea Grant Consortium

Amanda Guthrie. South Carolina Sea Grant Consortium

Katie Finegan, PE, South Carolina Sea Grant Consortium

Anuradha Mukherji, East Carolina University

Meghan Millea, East Carolina University

Kayode Nelson Adeniji, East Carolina University

Scott Curtis. The Citadel-James B. Near Center for Climate Studies

#### Limitations for Hazard Mitigation in Unincorporated Communities: Lessons From California and Texas

Danielle Rivera, University of California, Berkeley

Eliza Breder, University of California, Berkeley

Yasmin Wallis, University of California, Berkeley

#### An Innovative Approach to Support Animal Farming Community During 2021 Flood Evacuation

Haorui Wu, Dalhousie University

### TRACK 7: CROSS-SECTOR COLLABORATION AND STAKEHOLDER ENGAGEMENT ADDRESSING DISPARITIES IN FLOOD IMPACT AND MANAGEMENT

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

Location: Pine

#### MODERATOR.

Farinaz Motlagh, Stony Brook University



#### PRESENTATIONS:

#### **Exposing Disparities in Flood Adaptation for Equitable Future Interventions**

Lidia Cano Pecharroman, Massachusetts Institute of Technology ChangHoon Hahn, Princeton University

#### Racial Disparities Inside and Outside the 100-Year Flood Zone Map in Louisiana

Israt Jahan Tama, Louisiana State University Rebeca De Jesus Crespo, Louisiana State University Thomas Douthat, Louisiana State University Kevin Smiley, Louisiana State University

#### Disaster Risk Management in Land-Use Planning in Rwanda

Shelley McMullen, University of Colorado Denver

#### Social Vulnerability Determinants of Flood Loss in Small Urbanizing Regions

Sina Razzaghi Asl, Princeton University

#### Hurricane Ian Flooding and Inequitable Residential Impacts in Cape Coral, Florida

Gene Longenecker, University of Central Florida Christopher Emrich, University of Central Florida

 BREAK	

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

# TRACK 1: HAZARD MITIGATION AND PREPAREDNESS SOLUTIONS AND GOVERNANCE STRATEGIES IN FLOOD MANAGEMENT

4:15 to 5:45 p.m. MDT Location: Interlocken A

### MODERATOR:

Rebecca Bicksler, University of Nottingham



#### PRESENTATIONS:

Dynamics of Social Resilience to Flood Hazards in the Mekong Basin

Liang Emlyn Yang, University of Munich

#### Understanding Flood Mitigation Implementation Activities in Minnesota's Red River **Basin**

Sarah Kirkpatrick, North Dakota State University

#### Socioecological Resilience: An Evaluation of Coastal Wetlands as a Nature-Based Solution

Mitchell Meads, Texas A&M University at Galveston Sam Brody, Texas A&M University at Galveston

#### Floodplain Management in the United States: The Role of Local Governments

Miyuki Hino, University of North Carolina at Chapel Hill Katharine Mach, University of Miami AR Siders, University of Delaware

### TRACK 2. COMMINITY HEAITH AND WELL-REING PUBLIC HEALTH INNOVATIONS AND CHALLENGES

4:15 to 5:45 p.m. MDT Location: Interlocken B

#### MODERATOR:

Shriya Thakkar, Louisiana State University

#### PRESENTATIONS.

#### The Effects of Flood Disaster on Public Health in Kano Metropolis, Nigeria

Aondowase Targba, Federal University Gusau

#### Simplicity Rules: Evolutions in Health and Medical Risk Assessment

Elizabeth Rubin, Los Angeles County Department of Public Health Brandon Dean, Los Angeles County Department of Public Health



Caitlin Harvey, Los Angeles County Department of Public Health

# Essential Health Care Services Addressing Intimate Partner Violence During Public Health Emergencies

Sue Anne Bell, University of Michigan

Crystal Bell, The National Academies

Rosa Gonzalez-Guarda, Duke University

Sue Curry, University of Iowa

#### Communicating Risks at the Interface of Climate and Health

Hanadi Rifai, University of Houston

William Vines, University of Houston

Ainaz Khalili, University of Houston

Omar Bustami, University of Houston

### TRACK 3: EMERGENCY MANAGEMENT

### OPERATIONS AND COLLABORATIONS IN EMERGENCY MANAGEMENT

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

Location: Interlocken C

#### MODERATOR:

Ratna Okhai, University of South Florida

### PRESENTATIONS:

# The Role of Tasks in Organizational Collaborations During the Hurricane Katrina Response

Sabrina Mai, University of California, Irvine

Carter Butts, University of California, Irvine

#### **Current Trends in Emergency Management Standards**

Kesley Richardson, Loyola University

#### The State of Emergency Operations Centers in Colorado

Peter Loebach, Arapahoe Community College



Jacki Chavez, Arapahoe Community College

Andrew De Souza, Northeastern Junior College

Caitlin Caciola, Arapahoe Community College

### Organizational Recovery Metrics for Community Resilience Through Field

**Observations and Case Studies** 

Kelly Anderson, National Institute of Standards and Technology

Maria Dillard, National Institute of Standards and Technology

#### Organizational Resilience in First-Response Agencies: Visual Responses From First Responders

Kaila Witkowski, Florida Atlantic University

Santina Contreras, University of Southern California

Christa Remington, University of South Florida

Andrea M. Headley, Georgetown University

N. Emel Ganapati, Florida international University

### TRACK 4: EOUITY AND EMPOWERMENT

### PARTICIPATORY APPROACHES AND DIVERSE PERSPECTIVES

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

Location: Interlocken D

### MODERATOR:

Femke Mulder, University College London

#### PRESENTATIONS:

Fostering Community-Led Transformation: Lessons From Participatory Action Research Project in Jacksonville, Florida

Haleh Mehdipour, University of Florida

Jason von Meding, University of Florida

#### Reframing Reality: An Analysis of Vulnerability and Resiliency Among Poor Black Women

Yajaira Ayala, University of Delaware



#### Materializing the Promise of Convergence Science: Rethinking Community **Engagement in Puerto Rico**

Jenniffer Santos-Hernández, University of Puerto Rico at Río Piedras

Isabel Rivera Collazo, University of California, San Diego

Francisco Vidal Franceschi, University of Puerto Rico at Río Piedras

Gianni Rodríguez Roque, University of Puerto Rico at Río Piedras

Isaura Cortes Rodríguez, University of Puerto Rico at Río Piedras

#### Community-Driven Research for Adapting to Willapa Bay's Rapidly Changing Shore

Ashley Moore, University of Washington

Cat Hartwell, University of Washington

Connie Allen, Willapa Erosion Control Action Now

Roxanne J. Carini, University of Washington

George Kaminsky, Washington State Department of Ecology

Henry Bell, Washington State Department of Ecology

Nicole Errett, University of Washington

#### Long-Term Recovery Trajectories of Mexican-Origin Women After Hurricane Harvey

Melissa Villarreal, Natural Hazards Center

### TRACK 5. DATA-DRIVEN RISK MANAGEMENT DATA-DRIVEN RISK COMMUNICATION

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

#### MODERATOR:

Beth Bartel, U.S. Geological Survey

#### PRESENTATIONS.

San Diego County Multi-Hazard Early Warning App: Retention and Multilingual Survey Results

Danielle Sumy, National Science Foundation

Michael R. Brudzinski, Miami University of Ohio



Kaily Gomez, Miami University of Ohio

Yuliana Briceno, San Diego County Office of Emergency Services

Patty Jordan, San Diego County Office of Emergency Services

Michael Robles, San Diego County Office of Emergency Services

Stephen Rea, San Diego County Office of Emergency Services

#### NIH CHORDS: Making Integrated Climate, Environment, and Health Data Available for Researchers

Aubrey Miller, National Institute of Environmental Health Sciences

Ann Liu, National Institute of Environmental Health Sciences

Trisha Castranio, National Institute of Environmental Health Sciences

Schmitt Charles, National Institute of Environmental Health Sciences

Kyle Messier, National Institute of Environmental Health Sciences

Adam Burkholder, National Institute of Environmental Health Sciences

David Fargo, National Institute of Environmental Health Sciences

David Reif, National Institute of Environmental Health Sciences

Allison Motsinger-Reif, National Institute of Environmental Health Sciences

#### Generalizable Insights From Studying the Effectiveness of Avalanche Risk Communication

Pascal Haegeli, Simon Fraser University

#### Instructional Narratives: Flood Warning Information Sharing Within Community **Organizations**

Lakelyn E. Taylor, University of Vermont

Anne Jefferson, University of Vermont

Jill A. Brown, Research Triangle Institute

Elizabeth Doran, University of Vermont

Schuyler DeBree, Research Triangle Institute

Chris Johns, Research Triangle Institute

Bryan Luukinen, Research Triangle Institute

Sarah Noyes, University of Vermont

Brian Southwell, Research Triangle Institute



# TRACK 6: DISASTER RECOVERY AND RESILIENCE MODELS AND FRAMEWORKS FOR EQUITABLE RESILIENCE

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

Location: Centennial Ballroom

#### MODERATOR:

Seyyed Amin Enderami, University of Kansas

#### PRESENTATIONS:

A Social Welfare-Based Infrastructure Resilience Assessment Model: Toward Equitable Infrastructure Resilience

Sunil Dhakal, Florida International University Lu Zhang, Virginia Tech

# Synthesizing Post-Disaster Fieldwork Data: A Comprehensive Framework Integrating Qualitative and Quantitative Analyses

Diana Ramirez-Rios, State University of New York at Buffalo

Sayanti Mukherjee, State University of New York at Buffalo

Angelo Soto-Vergel, State University of New York at Buffalo

Judith Brennan, State University of New York at Buffalo

Huize Hou, State University of New York at Buffalo

Prasangsha Ganguly, American Airlines

#### How Long Does It Take To Document In-Situ Community Resilience and Recovery?

Elaina Sutley, University of Kansas

Maria Dillard, National Institute of Standards and Technology

Jennifer Helgeson, National Institute of Standards and Technology

Sara Hamideh, Stony Brook University

Maria Watson, Shimberg Center for Housing Studies

Shane Crawford, University of Alabama

Donghwan Gu, National Institute of Standards and Technology

Kenneth Harrison, National Institute of Standards and Technology

Leonardo Duenas-Osorio, Rice University



#### Long-Term Demographic Consequences of Disaster Devastation of American Communities Revisited

John Cross, University of Wisconsin-Oshkosh

#### **Embedding Equity in Infrastructure Resilience Research**

Natalie Coleman, Texas A&M University

Xiangpeng Li, Texas A&M University

Tina Comes, Delft University of Technology

Ali Mostafavi, Texas A&M University

### TRACK 7: CROSS-SECTOR COLLABORATION AND STAKEHOLDER ENGAGEMENT STAKEHOLDER ROLES IN CLIMATE ADAPTATION

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

Location: Pine

#### MODERATOR.

Shaila Shahid, International Centre for Climate Change and Development

#### PRESENTATIONS:

#### Multi-Stakeholders' Role in Reducing Greenhouse Effects in the Workplace: Evidence From Bangladesh

Khondoker Mokaddem Hossain, Bangladesh University of Professionals

#### What Resources Impact Behavior During Power Outages Caused by Extreme Weather Events?

Rebecca Entress, University of Central Florida

Kelly Stevens, University of Central Florida

#### Social Responses to Climate Change Attributed Flooding in South Louisiana

Kevin Smiley, Louisiana State University

Teye Yevuyibor, Louisiana State University

KayLynn Larrison, Louisiana State University

James Done, National Center for Atmospheric Research

Alexandra N. Ramos-Valle, National Center for Atmospheric Research



#### Strengthening Community Resilience for Reducing Disaster Risk Through Climate **Change Adaptation Practices**

Tareg Mahanud, University of Barishal Tanwee Das, University of Barishal

#### Balancing Community Values and Economic Feasibility in Resilience Planning **Through Participatory Framework**

Mahdi Zareei, Michigan State University Carissa Knox, University of Michigan Jennifer Helgeson, National Institute of Standards and Technology Steven Gray, Michigan State University

### 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 afternoon's discussions. Complimentary appetizers will be served and drinks will be available for purchase.

 END OF DAY	
8:00 p.m. MDT	



## THURSDAY, JULY 18

### REGISTRATION

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

Location: Atrium

### COFFFF 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 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.

#### SPFAKERS:

**Jacqueline Meszaros, National Science Foundation** Robert O'Connor, National Science Foundation **Danielle Sumy, National Science Foundation** 

	BKEAK	
	8:00 to 8:15 a.m. MDT	
<del></del>	CONCURRENT SESSIONS BEGIN 8:15 to 9:45 a.m. MDT	

### TRACK 1: HAZARD MITIGATION AND PREPAREDNESS INCLUSIVE ENGAGEMENT FOR ENHANCED DISASTER COMMUNICATION

8:15 to 9:45 a.m. MDT Location: Interlocken B



#### MODERATOR:

Szymon Parzniewski, Dalhousie University

#### PRESENTATIONS:

#### Communicating Warnings to Older Adults: Lessons From Hurricane Ian **Fvacuations**

John Watts, Jacksonville State University

Shih-Kai (Sky) Huang, Jacksonville State University

Jiang Shangkun, University of Florida

Yuran Sun, University of Florida

Xilei Zhao, University of Florida

#### Developing Inclusive Emergency Alerts and Warnings: Findings From the State of Colorado

Carson MacPherson-Krutsky, Natural Hazards Center

Mary Angelica Painter, Natural Hazards Center

Melissa Villarreal, Natural Hazards Center

Lori Peek, Natural Hazards Center

#### Analyzing Disaster Warning Stories: What Would a Sociolinguist Say?

Amy Takebe, Otaru University of Commerce

#### Framing Abstract Risk Communication Ideas and Methods in User-Friendly Language

Maureen Fordham, University College London

Femke Mulder, University College London

Christina Gatsogianni, Center for Security Studies

#### Virtual Data Dashboards: Is Rapid Mobilization of Public Health Data Possible Post-Disaster?

David Abramson, New York University

David Eisenman, University of California, Los Angeles

Jennifer Horney, University of Delaware

Cat Hartwell, University of Washington

Nicole Errett, University of Washington



### TRACK 2: COMMUNITY HEALTH AND WELL-BEING

PSYCHOLOGICAL AND SOCIAL IMPACTS ON AFFECTED COMMUNITIES

8:15 to 9:45 a.m. MDT Location: Interlocken D

#### MODERATOR:

Yajaira Ayala, University of Delaware

#### PRESENTATIONS.

Understanding Community Facing Activities of First Responders Surrounding the **COVID-19 Pandemic** 

Santina Contreras, University of Southern California

Kaila Witkowski, Florida Atlantic University

Joanne Perodin, Florida International University

Christa Remington, University of South Florida

Andrea Headley, Georgetown University

N. Emel Ganapati, Florida International University

#### Factors Associated With Recovery and Resilience After a Wildfire: Rural Families' **Experiences**

Rita Burke, University of Southern California

Santina Contreras, University of Southern California

Amber Anderson, University of Southern California

#### Analyzing Cumulative Impacts: Disaster Events and Depressive Health Outcomes in **Older Americans**

Shriya Thakkar, Louisiana State University

Kevin Smiley, Louisiana State University

Lauren Clay, University of Maryland–Baltimore County

#### Changes in Alcohol Consumption in Gulf Coast Communities After Disasters

Vanessa Parks, RAND Corporation

Lynsay Ayer, RAND Corporation

Samer Atshan, RAND Corporation



Rachana Seelam, RAND Corporation Bonnie Ghosh-Dastidar, RAND Corporation

### TRACK 3: EMERGENCY MANAGEMENT

EMERGING PRAXIS IN DISASTER MANAGEMENT

8:15 to 9:45 a.m. MDT Location: Centennial E

#### **MODERATOR:**

Andrea Ramos, Florida Atlantic University

#### PRESENTATIONS:

How Duration of Event Response Shapes Disasters: Reformulating Hazard Event Types

Samantha Montano, Massachusetts Maritime Academy Amanda Savitt, Argonne National Laboratory

From Prediction to Practice: Barriers to Adoption of Emergency Management Tools

Noah Hallisey, University of Rhode Island Austin Becker, University of Rhode Island Peter Stempel, Pennsylvania State University

A Conceptual Typology of Compound Hazards to Improve Theory and Practice

Logan Gerber-Chavez, Embry-Riddle Aeronautical University

Narratives and Representation in Disaster Picture Books After Japan's 3.11 Disaster

Elizabeth Maly, Tohoku University Ryo Saito, Tohoku University Julia Gerster, Tohoku University



### TRACK 4: EOUITY AND EMPOWERMENT

GENDERED DIMENSIONS OF DISASTERS ACROSS BORDERS

8:15 to 9:45 a.m. MDT Location: Centennial F

### MODERATOR:

Greg Witkowski, Columbia University

#### PRESENTATIONS:

#### **Disaster Experiences of Incarcerated Women**

Carlee Purdum, Texas A&M University

Benika Dixon, Texas A&M University

Tara Goddard, Texas A&M University

Marci Simmons, Lioness: Justice Impacted Women's Alliance

Jennifer Toon, Lioness: Justice Impacted Women's Alliance

#### Women's Perspectives on Evacuation: Implications for Risk Reduction in Guatemala and Beyond

Beth Bartel, U.S. Geological Survey

Ailsa Naismith, University of Bristol

Rüdiger Escobar Wolf, Michigan Technological University

#### Rewarding the Gender Binary: Disaster Response by Gender-Focused Local Non-Governmental Organizations in Turkey

Bahar Aldanmaz, Boston University

#### Understanding Queer and Non-Queer College Student Experiences and Needs Post-**Hurricane Fiona**

Kyle Breen, Dalhousie University

#### Strengthening Gender Inclusive Recovery, Reconstructions, and Resilient Infrastructures: Learning From Asia-Pacific Region

Shaila Shahid, Tomorrow's Cities



### TRACK 5: DATA-DRIVEN RISK MANAGEMENT ADVANCING RISK MANAGEMENT AND ANALYSIS

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

Location: Spruce

#### MODERATOR:

Mohsen Zaker Esteghamati, Utah State University

#### PRESENTATIONS:

# A Discrete Simulation Framework: Modeling Damage for Resilience Assessment Under Natural Hazards

Shayan Razi, University of Massachusetts Dartmouth

Arghavan Louhghalam, University of Massachusetts Lowell

Mazdak Tootkaboni, University of Massachusetts Dartmouth

# Probabilistic Seismic Analysis of Water Supply Interruptions in Terms of Societal Impact

Rithika Dulam, National Institute of Standards and Technology

Rachel Davidson, University of Delaware

#### Rhode Island Coastal Hazard, Analysis, Modeling, and Prediction System

Austin Becker, University of Rhode Island

Noah Hallisey, University of Rhode island

Peter Stempel, Pennsylvania State University

Kyle McElroy, University of Rhode Island

Sam Adams, University of Rhode Island

Greg Bonynge, University of Rhode Island

#### A Typology of Behavioral Adaptation to Compounding Wildfire-Related Hazards

Francisca Santana, University of Washington

Heidi Huber-Stearns, University of Michigan

Alexandra Paige Fischer, University of Michigan



### TRACK 6: DISASTER RECOVERY AND RESILIENCE SOCIAL DIMENSIONS AND STRATEGIES IN WILDFIRE RECOVERY

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

Location: Pine

#### MODERATOR:

Alyssa Provencio, University of Central Oklahoma

#### PRESENTATIONS:

#### Collective Outcomes for Post-Wildfire Rebuilding

Noah Gershon, University of Colorado Boulder

Abbie Liel, University of Colorado Boulder

Amy Javernick-Will, University of Colorado Boulder

Matthew Koschmann, University of Colorado Boulder

#### Blame and Behavior: A Survey of Wildfire-Affected Residents in Paradise, California

Ryan Miller, University of California, Davis

Mitchell Snyder, University of California, Davis

#### The Missing Middle of Disaster Displacement: Quality of Life Post-Camp Fire

Mitchell Snyder, University of California, Davis

Ryan Miller, University of California, Davis

#### Assessing Inequity in Wildfire Resource Allocation Using a Data-Driven Approach

Sayanti Mukherjee, State University of New York at Buffalo

Fatima Umar, State University of New York at Buffalo

#### Policy Images, Narratives, and Post-Disaster Resilience in Colorado's Marshall Fire

Nathan Jeschke, University of Colorado Denver

Deserai Crow, University of Colorado Denver

Betsy Smith, University of Colorado Denver



# TRACK 7: CROSS-SECTOR COLLABORATION AND STAKEHOLDER ENGAGEMENT NETWORKS AND NARRATIVES IN DISASTER MANAGEMENT

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

Location: Fir

#### MODERATOR:

Lu Zhang, Virginia Tech

#### PRESENTATIONS:

Social Networks, Shocks, and Consumption: Evidence from Rural Farmers in Bangladesh

Tanvir Pavel, Rose-Hulman Institute of Technology

# Understanding the Social Media Information Switching Behavior During Compound Disasters

Khondhaker Al Momin, University of Oklahoma

Arif Mohaimin Sadri, University of Oklahoma

Kristin Olofsson, Colorado State University

K.K. "Muralee" Muraleetharan, University of Oklahoma

# Leveraging News Media for Disaster Resilience Information in Data Sparse Environments

Harman Singh, Pennsylvania State University

Helen Greatrex, Pennsylvania State University

Trevor Birkenholtz, Pennsylvania State University

#### Sincere Depiction of Hazard Impacts for Coastal Public Engagement

Peter Stempel, Pennsylvania State University

Ellie Nasr-Azadani, Pennsylvania State University

Annette Grilli, University of Rhode Island

Stephan Grilli, University of Rhode Island

Isaac Ginis, University of Rhode Island

Deborah Crowley, University of Rhode Island

Roland Duhaime, University of Rhode Island

Christopher Damon, University of Rhode Island

Pam Rubinoff, University of Rhode Island



# Perceptions of Adaptation and Retreat in Southwest Florida Rebecca Bicksler, University of Nottingham Christopher Ives, University of Nottingham Meghan Alexander, University of Nottingham BRFAK 9:45 to 10:15 a.m. MDT ROUNDTABLES BEGIN 10:15 to 11:45 a.m. MDT

### ROUNDTABLE

### ADVANCING DISASTER RESEARCH COORDINATION

10:15 to 11:45 a.m. MDT Location: Interlocken B

#### FACILITATOR:

Jamie Vickery, National Oceanic and Atmospheric Administration

#### DISCUSSION:

This session was inspired by the following submission:

#### Wildfire and Fire Weather Social Science Research Coordination

Jamie Vickery, National Oceanic and Atmospheric Administration Stephanie Hoekstra, Global Systems Laboratory Shadya Sanders, National Oceanic and Atmospheric Administration Emily Wells, National Oceanic and Atmospheric Administration Zach Tolby, National Oceanic and Atmospheric Administration Cole Vaughn, National Oceanic and Atmospheric Administration



### ROUNDTABLE

### FOSTERING TRANSDISCIPLINARY COLLABORATION FOR RESEARCH AND **FNGAGFMFNT**

10:15 to 11:45 a.m. MDT Location: Interlocken D

#### FACILITATOR:

Aubrey Miller, National Institute of Environmental Health Sciences

#### DISCUSSION:

This session was inspired by the following submissions:

Climate-Related Disaster Resources, Data, and Networks to Empower Transdisciplinary Research

Aubrey Miller, National Institutes of Environmental Health Sciences

#### Shared-Use Research Infrastructure for Resilience and Climate Adaptation **Community Testbeds**

Sara Hamideh, Stony Brook University Elaina Sutley, Univeristy of Kansas Jennifer Bridge, University of Florida Dan Cox, Oregon State University

#### ROUNDTABLE

### CORF COMPETENCIES AND PROFESSIONAL DEVELOPMENT FOR DISASTER MANAGERS

10:15 to 11:45 a.m. MDT Location: Centennial E

### FACILITATOR.

Terry Cooper, University of New Haven



#### DISCUSSION:

This session was inspired by the following submissions:

#### Revaluation of Disaster Core Competencies: Updates for a New Decade

Rita Burke, University of Southern California

Norma Quintanilla, National Center for Disaster Medicine and Public Health

Thomas Kirsch, National Center for Disaster Medicine and Public Health

Lauren Knieser, PointClickCare

#### Interprofessional Education: A Curricular Framework for Next Generation **Emergency Management Professionals**

Terry Cooper, University of New Haven

#### The Capable Emergency Management Professional: Qualifications and **Specifications Addressing Institutional Performance Gaps**

Joshua McDuffie, Vanderbilt University

Terry Cooper, University of New Haven

Kesley Richardson, Loyola University

### ROUNDTARIF

### FNHANCING ACADEMIC SUPPORT FOR INTERDISCIPLINARY RESEARCH

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

Location: Centennial F

#### FACILITATOR:

Rodrigo Costa, University of Waterloo

#### DISCUSSION.

This session was inspired by the following submissions:

#### How Can Academic Hiring and Promotion Better Support Scholars Working Across Disciplines?

Rodrigo Costa, University of Waterloo

Alyssa Provencio, University of Central Oklahoma



Mohsen Zaker, Utah State University Kaleigh Yost, Pennsylvania State University

#### Interdisciplinary Research Community Supporting Sustainable Disaster Debris **Management Research and Practices**

Juyeong Choi, Florida A&M University and Florida State University College of Engineering

Sabarethinam Kameshwar, Louisiana State University Derek Manheim, California Polytechnic State University

Joseph Louis, Oregon State University

### ROUNDTARIF

### INTEGRATING PRACTITIONER AND RESEARCHER APPROACHES

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

Location: Spruce

#### FACILITATOR:

Melina Matos, Texas A&M University

#### DISCUSSION:

This session was inspired by the following submissions:

#### Partnerships with Community Users to Pilot IN-CORE as a Resilience Planning Tool

Melina Matos, Florida Atlantic University Sara Hamideh, Stony Brook University

#### Finding the Gaps to Improve Disaster Planning for Marginalized Populations

Cassandra R. Davis, University of North Carolina at Chapel Hill Miyuki Hino, University of North Carolina at Chapel Hill Philip Berke, University of North Carolina at Chapel Hill



#### ROUNDTABLE

NARRATIVES OF RESILIENCE: STORYTELLING IN DISASTER RESEARCH

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

Location: Pine

#### FACILITATOR:

Hannah Friedrich, University of Arizona

#### DISCUSSION:

This session was inspired by the following submissions:

#### Lessons From the 2022 Yellowstone Floods: The Power of Documentary Film Interviews

Hugo Sindelar, Montana State University

#### Reflexivity in Storytelling: A Graduate Student Roundtable of Recent Fieldwork **Experiences**

Hannah K. Friedrich, University of Arizona

Yajaira I. Ayala, University of Delaware

Melissa Villarreal, University of Colorado Boulder

Jen Liu, Cornell University

Tim Schütz, University of California, Irvine

Margaux Fisher, University of California, Irvine

#### **Exploring Residential Decision-Making After Wildfire With Photovoice**

Ronald Schumann, University of North Texas

Alex Greer, State University of New York at Albany

Sherri Binder, Brokopp Binder Research and Consulting

Miranda Mockrin, U.S. Forest Service

#### Exploring the Community Impacts of 2017 and 2022 Hurricanes in Puerto Rico

Diana Ramirez-Rios, State University of New York at Buffalo

Maria Carolina Torrado-Bayona, University of the North, Colombia

Angelo Soto-Vergel, State University of New York at Buffalo



Community Narratives: Influencing Participatory Action Research Cycles, Processes, and Researchers Haleh Mehdipour, University of Florida ROUNDTABLE COMMUNITY KNOWI FOGE FOR DISASTER RESILIENCE AND SOCIAL CHANGE 10:15 to 11:45 a.m. MDT Location: Fir FACILITATOR. Jennifer Lawrence, University of Virginia DISCUSSION: This session was inspired by the following submissions: Serotiny: Discerning Natural Wisdom for Disaster Resilience and Social Repair Jennifer Lawrence, University of Virginia The Epistemology of Disasters and Social Change Mitchell Stripling, Columbia University HUNCH

## 

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

## TRACK 1: HAZARD MITIGATION AND PREPAREDNESS

REAL ESTATE MARKETS AND POLICY

1:15 to 2:45 p.m. MDT Location: Interlocken B



#### MODERATOR:

Miyuki Hino, University of North Carolina at Chapel Hill

#### PRESENTATIONS:

Hurricanes and Sinkholes: Analyzing Real Estate Market Responses to Multiple **Environmental Risks** 

Mohammad Khan, Wayne State College

Pallab Mozumder, Florida International University

#### A Decision Framework for Equitable Use of Residential Property Acquisition Federal **Funds**

Farinaz Motlagh, Stony Brook University

Sara Hamideh, Stony Brook University

#### The Consequences of Delayed Insurance Payout—How Long Is Too Long?

Adam Andresen, University of Delaware

Nesar Ahmed Khan, University of Delaware

Abbey Hotard, University of Delaware

Joseph Trainor, University of Delaware

#### Assessing Population Situational Preparedness for Sequential Tropical Cyclone **Hazards**

Tianle Duan, Purdue University

Qingchun Li, Purdue University

Dazhi Xi, Princeton University

Ning Lin, Princeton University

#### **Evaluating Residential Tornado Saferoom Purchasing Behavior Using Behavioral Economics**

Madison Graham, University of Kansas

Brett Gelino, John Hopkins University

Elaina Sutley, University of Kansas

Derek Reed, Institutes of Behavioral Resources, Inc.



#### TRACK 2: COMMUNITY HEALTH AND WELL-BEING

#### STRATEGIES AND CHALLENGES IN POST-DISASTER LIVING ENVIRONMENTS

1:15 to 2:45 p.m. MDT Location: Interlocken D

#### MODERATOR:

Thomas Birkland, North Carolina State University

#### PRESENTATIONS:

#### Alternatives for Resilient Communities: A Tool to Inform Optimal Tornado Retrofits

William Hughes, National Institute of Standards and Technology

Tasnim Ibn Faiz, National Institute of Standards and Technology

Kenneth Harrison, National Institute of Standards and Technology

#### Resettlement Challenges Under Uncertain Hazard Information: The Central Sulawesi Earthquake Case

Kanako luchi, Tohoku University

Nuraini Rahma Hanifa, National Research and Innovation Agency of Indonesia

Rahmadiyah Tria Gayathri, Organization Forum Sudut Pandang

Robert Olshansky, University of Illinois at Urbana-Champaign

#### Differences Between Women and Men in Perception of Post-Disaster Living Conditions

Kiyomine Terumoto, Kwansei Gakuin University

#### Before and After Disaster: Homeowner Protective Actions in a Changing Climate

Rachel Hamburger, University of Notre Dame

Tracy Kijewski-Correa, University of Notre Dame

Debra Javeline, University of Notre Dame

#### Findings From Evaluation of Red Cross Home Fire Campaign and Wildfire **Preparedness Visits**

Megan Heffernan, University of Chicago

Monica Owens Doyle, American Red Cross

Katherine Gelfand, University of Chicago



#### TRACK 3: EMERGENCY MANAGEMENT

#### STRATEGIES FOR FEFECTIVE HAZARD MITIGATION POLICY AND PLANNING

1:15 to 2:45 p.m. MDT Location: Centennial E

#### MODERATOR:

Tara Goddard, Texas A&M University

#### PRESENTATIONS:

#### Disaster Root Cause Attributions Predict Risk Reduction Beliefs and Policy Support

Marjorie Prokosch, Rochester Institute of Technology Jessica Pardee, Rochester Institute of Technology

#### Does Outsourced Planning Improve Planning Outcome? A Quantitative Analysis on Mitigation Plan Quality

Yiwen Wu, University of Kansas Ward Lyles, University of Kansas

#### Disasters and Disaster Risk Reduction in Latin America: The Mediating Effects of **Risk Perception**

Barry Levitt, Florida International University Humayra Sultana, Florida International University

#### Incorporating Risk Preferences Into Community Resilience Planning

Christina Gore, National Institute of Standards and Technology Sherief Elsibaie, University of Maryland Jennifer Helgeson, National Institute of Standards and Technology David Butry, National Institute of Standards and Technology Bilal Ayyub, University of Maryland

## TRACK 4: EOUITY AND EMPOWERMENT

#### DISASTERS AND PEOPLE EXPERIENCING HOUSING INSECURITY

1:15 to 2:45 p.m. MDT Location: Centennial F



#### MODERATOR:

Ronald Schumann, University of North Texas

#### PRESENTATIONS:

Linking Social Vulnerability to Disaster Outcomes and Recovery for Renter Populations

Sanam Aksha, University of Central Florida Chris Emrich, University of Central Florida

#### **Rental Housing in Floodplains**

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

#### Flood Risk Among Vulnerable Renters in Basement Housing Units in New York

Ambika Nair, Federal Reserve Bank of New York
Claire Kramer-Mills. Federal Reserve Bank of New York

#### The Disaster of Survival: Challenges of People Experiencing Homelessness

Andrea Ramos, Florida International University

## Show Me You Care: Unmet Disaster Needs Among Houston Public Housing Residents

Chandler Ian Wilkins, Texas A&M University

#### TRACK 5: DATA-DRIVEN RISK MANAGEMENT

## ASSESSING HAZARD RISKS, INFRASTRUCTURE ADAPTATION, AND ZONING STRATEGIES

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

#### **MODERATOR:**

John Cross, University of New South Wales



#### PRESENTATIONS:

#### Flood Risk and Urban Vulnerability in Misclassified FEMA Zones in Houston, Texas

Yilei Yu, Arizona State University

Dylan Connor, Arizona State University

Aaron Flores, Arizona State University

Sara Meerow, Arizona State University

#### Inferring Near-Surface Wind Characteristics From Public-Shared Debris-Flight **Videos During Non-Synoptic Wind Events**

Daniel Yahya, Auburn University

David Roueche, Auburn University

Franklin Lombardo, University of Illinois at Urbana-Champaign

Guangzhao Chen, Florida International University

#### An Agent-Based Model of Adaptation to Sea-Level Rise Considering Impacts to Infrastructure

Dylan Sanderson, National Institute of Standards and Technology

Terri McAllister, National Institute of Standards and Technology

Jennifer Helgeson, National Institute of Standards and Technology

#### Impact of Material Deterioration on Tornadic Vulnerability in Built Infrastructure

Pauline Karanja, University of North Carolina at Charlotte

### TRACK 6: DISASTER RECOVERY AND RESILIENCE

### HOUSING RECOVERY AND RESILIENCE

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

Location: Pine

#### MODERATOR.

Hannah Friedrich, University of Arizona

#### PRESENTATIONS:

Assessing Viable Strategies to Mitigate Post-Disaster Unmet Housing Needs in Canada



Rodrigo Costa, University of Waterloo

Long-Term Outcomes of Post-Disaster Housing Recovery in Japan: Kobe to Tohoku

Elizabeth Maly, Tohoku University

## Examining the Impacts of Financial Loss Among Hurricane Survivors in North Carolina

Nikhil Kothegal, University of North Carolina at Chapel Hill

Kristen Cowan, University of North Carolina at Chapel Hill

Rene Iwo, University of North Carolina at Chapel Hill

Elizabeth Frankenberg, University of North Carolina at Chapel Hill

## Measuring Resilient Neighborhoods of Mumbai: A Hierarchical Fuzzy Logic Analysis

Piyuch Kumar, Indian Institute of Technology–Bombay Krishnan Narayanan, Indian Institute of Technology–Bombay Arnab Jana, Indian Institute of Technology–Bombay

## TRACK 7: CROSS-SECTOR COLLABORATION AND STAKEHOLDER ENGAGEMENT DYNAMICS OF PROSOCIAL BEHAVIOR IN DISASTER RECOVERY

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

Location: Fir

#### MODERATOR:

Santina Contreras, University of Southern California

#### PRESENTATIONS:

**How Nonprofit Coordination Aids Recovery** 

Greg Witkowski, Columbia University

## **Understanding How Non-Governmental Organizations Respond to Disasters and Marginalized Populations**

Cassandra R. Davis, University of North Carolina at Chapel Hill

Evan Johnson, University of North Carolina at Chapel Hill

Simona Goldin, University of North Carolina at Chapel Hill



Ruth Fetaw, University of North Carolina at Chapel Hill Megan Griffard, University of Nevada, Las Vegas

#### The Paradox of Externally Driven Localization

Femke Mulder, University College London

#### Understanding Support for Equitable Needs-Based Disaster Aid Distribution Policy

Andrea Mah, University of Massachusetts Amherst Shannon Callaham, University of Massachusetts Amherst Ezra Markowitz, University of Massachusetts Amherst

RRFAK

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

### TRACK 1: HA7ARD MITIGATION AND PREPAREDNESS

#### APPROACHES TO CLIMATE CHANGE ADAPTATION

3:15 to 4:45 p.m. MDT Location: Interlocken B

#### MODERATOR:

Samuel Adams, University of Rhode Island

#### PRESENTATIONS:

#### Climate Change Adaptation Through Agroforestry: An Integrated Assessment in San Diego, California

Amy Quandt, San Diego State University Judy Bross, San Diego State University

Isla Simpson, National Center for Atmospheric Research

Adrianna Foster, National Center for Atmospheric Research

Forrest Lacey, National Center for Atmospheric Research

#### Spatial and Temporal Analyses of Municipal Fiscal Stress Under Sea Level Rise

Qian He, Rowan University



Saeed Namadi, University of Maryland, College Park

Ciara Wenger, Rowan University

Deb Niemeier, University of Maryland, College Park

#### Using Scenario Games to Navigate Adaptation and Retreat

Rebecca Bicksler, University of Nottingham

Christopher Ives, University of Nottingham

Meghan Alexander, University of Nottingham

#### **Emergency Response and Climate Change in the Arctic**

Thomas Birkland, North Carolina State University

## Examining Heat and Green Infrastructure Planning and Governance in Phoenix, Arizona

Shaylynn Trego, Arizona State University

Sara Meerow, Arizona State University

#### TRACK 2: COMMUNITY HEALTH AND WELL-BEING

#### RESILIENT INFRASTRUCTURE: INNOVATIONS FOR CLIMATE EQUITY

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

Location: Interlocken D

#### **MODERATOR:**

Kyle Breen, Dalhousie University

#### PRESENTATIONS:

#### A Climate Resilient Solution to Earthen Infrastructure in Katwijk and Mississippi

Amber Spears, Jackson State University

Sadik Khan, Jackson State University

Rober Whalin, Jackson State University

#### **Equity Driven Infrastructure Network Risk Management**

Abigail Beck, University of Illinois Urbana-Champaign

Eun Jeong Cha, University of Illinois Urbana-Champaign

Walter Peacock, Texas A&M University



#### Mitigation Planning Framework for Improving Post-Hazard Critical Service Accessibility

Tasnim Faiz, National Institute of Standards and Technology Kenneth Harrison, National Institute of Standards and Technology

#### TRACK 3: EMERGENCY MANAGEMENT

#### TRANSPORTATION INSIGHTS FOR SUSTAINABILITY

3:15 to 4:45 p.m. MDT Location: Centennial E

#### MODERATOR.

Sarah Kirkpatrick, North Dakota State University

#### PRESENTATIONS:

Transit Agencies and Wildfire Evacuation: Case Study of the 2021 Caldor Fire

Tara Goddard, Texas A&M University

#### Importance Sampling for Resilience Assessment of Road Transportation Systems

Mingxue Guo, Beijing Jiaotong University

Tingting Zhao, Beijing Jiaotong University

Ziyou Gao, Beijing Jiaotong University

Jianxi Gao, Rensselaer Polytechnic Institute

#### Evaluating Research and Planning for Climate Displacement in the Arid West

Dallin Johnson, Utah State University

#### Quantifying the Drivers of Household Displacement Duration in Recent U.S. Disasters

Nicole Paul, University College London

Carmine Galasso, University College London

Jack Baker, Stanford University

Vitor Silva, Global Earthquake Model Foundation



#### TRACK 4: EQUITY AND EMPOWERMENT

#### BRIDGING EQUITY GAPS AND EMPOWERING COMMUNITIES

3:15 to 4:45 p.m. MDT Location: Centennial F

#### MODERATOR:

Simon Dickinson, University of Plymouth

#### PRESENTATIONS:

Managing Disaster Equity: From Knowledge to Action

Karl Kim, University of Hawaii

#### Dark Was the Night: Examining Power Outage Effects From Winter Storm Elliott

Adam Andresen, University of Delaware

#### Self-Reflection and Autoethnography: Interpreting a Field Experience in War-Affected Israel

Jack Rozdilsky, York University

## Remotely Sensed Blue Tarps and Resident Narratives to Triangulate Hurricane Recovery Gaps

Hannah Friedrich, University of Arizona Beth Tellman, University of Arizona

#### Disparities in Flooding: How Redlining Still Drowns Certain Communities

Elizabeth Apple, University of Kansas Amin Enderami, University of Kansas Elaina Sutley, University of Kansas Admin Husic, University of Kansas

## TRACK 5: DATA-DRIVEN RISK MANAGEMENT DATA AND MODELS FOR DISASTER RESPONSE AND RECOVERY



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

Location: Spruce

#### MODERATOR:

Ruijie Bian, Louisiana State University

#### PRESENTATIONS:

#### Visual Communication of Aftershock Forecasts Driven by User Needs

Max Schneider, U.S. Geological Survey

Anne Wein, U.S. Geological Survey

Nicholas van der Elst, U.S. Geological Survey

Sara K. McBride, U.S. Geological Survey

Julia Becker, Massey University

Raul Castro, Center for Scientific Research and Higher Education

Manuel Diaz, El Salvador Ministry of Environment and Natural Resources

Hector Gonzalez-Huizar, Center for Scientific Research and Higher Education

Jeanne Hardebeck, U.S. Geological Survey

Andrew Michael, U.S. Geological Survey

Luis Mixco, El Salvador Ministry of Environment and Natural Resources

Morgan Page, U.S. Geological Survey

Jocelyn Palomo, El Salvador Ministry of Environment and Natural Resources

#### Monitoring Post-Disaster Reconstruction to Support Evaluation of Early Recovery **Frameworks**

Sabine Loos, University of Michigan

Paula Bürgi, U.S. Geological Survey

Kanako luchi, Tohoku University

#### Validating Resilience Indicators With the Housing Recovery from the 2016 **Kumamoto Earthquake**

Yuto Shiozaki, National Research Institute for Earth Science and Disaster Resilience Fumio Yamazaki, National Research Institute for Earth Science and Disaster Resilience Wen Liu, Chiba University



#### TRACK 6: DISASTER RECOVERY AND RESILIENCE

RESILIENCE ACROSS SECTORS: INSIGHTS FROM LOCAL AND GLOBAL PERSPECTIVES

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

Location: Pine

#### MODERATOR:

Joseph Richmond, Arkansas State University

#### PRESENTATIONS:

## Analyzing Axiological Antecedents of Multisector Stakeholder Collaboration in Resilience Planning

Hang Ren, Virginia Tech

Lu Zhang, Virginia Tech

Travis Whetsell, Georgia Institute of Technology

N. Emel Ganapati, Florida International University

## Plan Evaluation for Heat Resilience: Complementary Methods to Comprehensively Assess Heat Planning

Sara Meerow, Arizona State University

Ladd Keith, University of Arizona

Malini Roy, University of Arizona

Shaylynn Trego, Arizona State University

## Understanding Motivations for Volunteering in Disaster Preparedness in New Zealand

Manomita Das, Massey University

Julia Becker, Massey University

Emma Hudson-Doyle, Massey University

Sara K. McBride, U.S. Geological Survey

#### Centering Equity in Community Resilience Planning: Lessons From Case Studies

Emily Eisenhauer, U.S. Environmental Protection Agency

Siena Henson, U.S. Environmental Protection Agency



Marissa Matsler, U.S. Environmental Protection Agency

Keely Maxwell, U.S. Environmental Protection Agency

Ian Reilly, U.S. Environmental Protection Agency

Maureen Shacklette, U.S. Environmental Protection Agency

Susan Julius, U.S. Environmental Protection Agency

Brittany Kiessling, U.S. Environmental Protection Agency

Meridith Fry, U.S. Environmental Protection Agency

Raven Nee, U.S. Environmental Protection Agency

Kyle Bryant, U.S. Environmental Protection Agency

Jeanine Finely, U.S. Environmental Protection Agency

Rabi Kieber, U.S. Environmental Protection Agency

### TRACK 7: CROSS-SECTOR COLLABORATION AND STAKEHOLDER ENGAGEMENT INTEGRATED STRATEGIES FOR WILDFIRE RESILIENCE

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

Location: Fir

#### MODERATOR:

Carson MacPherson-Krutsky, Natural Hazards Center

#### PRESENTATIONS:

Disadvantaged Communities and Infrastructure Service Disruptions During Wildfires in Western United States

Susan S. Clark, State University of New York at Buffalo

Sayanti Mukherjee, State University of New York at Buffalo

Jose Walteros, State University of New York at Buffalo

Jungwon Yeo, University of Central Florida

Poulomee Roy, State University of New York at Buffalo

#### Land Use-Based Wildfire Planning for Unincorporated Communities in the Western **United States**

Tasnim Isaba, University of Utah

Divya Chandrasekhar, University of Utah



Suraksha Bhandari, University of Utah

Andre Loquellano, Stony Brook University

Danya Rumore, University of Utah

Donovan Finn, Stony Brook University

Keith Bartholomew, University of Utah

N. Emel Ganapati, Florida International University

Santina Contreras, University of Southern California

#### Exploring Data Resources in Studies of Wildfire Exposures and Human Health

Jacqueline Barkoski, Social & Scientific Systems, Inc.

Erin Van Fleet, Social & Scientific Systems, Inc.

Ann Liu, Kelly Government Solutions

Steven Ramsey, Social & Scientific Systems, Inc.

Richard Kwok, National Institute on Aging

Aubrey Miller, National Institute of Environmental Health Sciences

#### Risk-Risk Tradeoffs and Prescribed Fire in Colorado

Michael Hannigan, University of Colorado Boulder

Katherine Dickinson, University of Colorado Anschutz Medical Campus

Colleen Reid, University of Colorado Boulder

Hannah Brenkert-Smith, University of Colorado Anschutz Medical Campus

Evan Coffey, University of Colorado Boulder

Sean Benjamin, University of Colorado Boulder

Annamarie Guth, University of Colorado Boulder

Marissa Dauner, University of Colorado Boulder

Carla Nyquist, University of Colorado Anschutz Medical Campus

Stephanie Pease, University of Colorado Anschutz Medical Campus

#### Examining Hazard Mitigation After the Marshall Fire Through a Social Equity Lens

Hannah Walters, Colorado School of Public Health Katherine Dickinson, Colorado School of Public Health Molly Kadota, Colorado School of Public Health

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



#### 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 2024 Researchers Meeting. The chairs 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 16 to 17, 2025, in Broomfield, Colorado.

#### SPFAKERS:

Rodrigo Costa, University of Waterloo

2024 Researchers Meeting Chair

Alyssa Provencio, University of Central Oklahoma

2024 Researchers Meeting Chair

MFFTING ADJOURNS

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 <a href="https://hazards.colorado.edu/workshop/2024/abstract/index/researchers-meeting">hazards.colorado.edu/workshop/2024/abstract/index/researchers-meeting</a>.

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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I ORI PFFK Natural Hazards Center University of Colorado Boulder Principal Investigator (NSF Award #1841338 and #1635593)



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For more information or to join, please visit:

isa-sociology.org/en/research-networks/research-committees/rc39-sociologyof-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.

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	5.3
Climate and Development	4.6
Climate Risk Management	4.4
Critical Disaster Studies	n/a
Disaster Medicine and Public Health Preparedness	2.3
Disaster Prevention and Management: An International Journal	2.1
Disaster Prevention and Resilience	n/a
Disasters	3.2
Earthquake Spectra	4.3
Ecology and Society	5.275
Economics of Disasters and Climate Change	n/a
Emergency Medicine Journal	3.2
Environment and Behavior	7.2
Environmental Hazards	3.1
Environmental Management	3.9
Environmental Sociology	2.5
European Journal of Emergency Medicine	4.4
GeoHazards	n/a
Geomatics, Natural Hazards and Risk	4.7
Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards	4.2
Global Environmental Change: Human and Policy Dimensions	8.9
Health in Emergencies & Disasters	n/a



JOURNAL NAME	Five-Year Impact Factor*
Human and Ecological Risk Assessment: An International Journal	4.4
International Journal of Business Continuity and Risk Management	n/a
International Journal of Climate Change Strategies and Management	3.8
International Journal of Crisis Communication	n/a
International Journal of Disaster Resilience in the Built Environment	1.6
International Journal of Disaster Response and Emergency	n/a
International Journal of Disaster Risk Reduction	5.0
International Journal of Disaster Risk Science	4.7
International Journal of Earthquake and Impact Engineering	n/a
International Journal of Earthquake Engineering and Hazard Mitigation	n/a
International Journal of Emergency Management	0.5
International Journal of Emergency Services	1.0
International Journal of Mass Emergencies and Disasters	n/a
International Journal of Natural Disasters & Health Security	n/a
International Journal of Wildland Fire	3.1
Jamba: Journal of Disaster Risk Studies	1.4
Journal of Applied Volcanology	0.731
Journal of Business Continuity & Emergency Planning	n/a
Journal of Climate	4.9
Journal of Climate Change and Health	n/a
Journal of Contingencies and Crisis Management	3.1
Journal of Disaster Research	0.8
Journal of Disaster Studies	n/a
Journal of Emergency Management	n/a
Journal of Environmental Management	8.7
Journal of Extreme Events	n/a
Journal of Flood Risk Management	4.1
Journal of Geography & Natural Disasters	n/a
Journal of Homeland Security and Emergency Management	1.1
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	3.3
Journal of Seismology and Earthquake Engineering	n/a
Journal of Traumatic Stress	3.3
Journal of Volcanology and Geothermal Research	2.9
Landslides	7.0
Natural Hazards	3.9
Natural Hazards and Earth System Sciences	4.7
Natural Hazards Research	n/a
Natural Hazards Review	3.2



JOURNAL NAME	Five-Year Impact Factor*
Nature Climate Change	31.4
npj Natural Hazards	n/a
Population and Environment	4.1
Pracademic Affairs	n/a
Prehospital and Disaster Medicine	2.2
Progress in Disaster Science	n/a
Psychological Trauma: Theory, Research, Practice, and Policy	5.6
Risk Analysis	3.8
Risk, Hazards, & Crisis in Public Policy	3.5
Science of Tsunami Hazards	n/a
Seismica	n/a
Traumatology	3.2
Weather	1.9
Weather, Climate, and Society	2.2

\*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 June 4, 2024. Updates or suggested journal additions should be sent to hazctr@colorado.edu.



## **S** Sage



#### 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

#### Annual Subscription Information

Subscription Type	Price
Institutional Subscription - E-access	\$722.00
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Institutional Backfile Purchase - E-access (Content through 1998)	\$982.00
Individual Subscription - E-access	\$139.00



# 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 370 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: <a href="https://hazards.colorado.edu/resources/research-centers">hazards.colorado.edu/resources/research-centers</a>.

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 <a href="mailto:lori.peek@colorado.edu">lori.peek@colorado.edu</a>.



## 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.

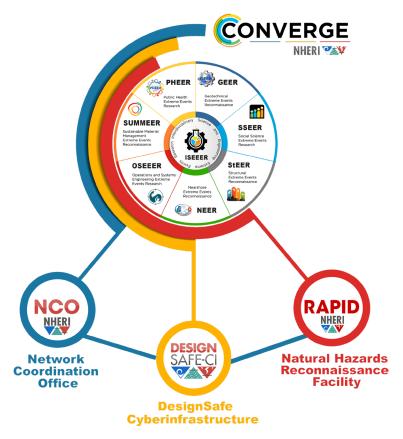
CONVERGE serves as the leadership hub for eight Extreme Events Reconnaissance

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 <a href="extreme events">extreme events</a>
research check sheets that help prepare students and others new to the field to conduct hazards and disaster research. CONVERGE has developed 12 interactive <a href="training">training</a>
modules, which have been completed by more than 10,000 users across the world. 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**.





## SUBSCRIPTION INFORMATION

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



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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/2024/researchers-meeting-survey.





## **SAVE THE DATES!**

### **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

### 51ST ANNUAL NATURAL HAZARDS WORKSHOP

Sunday, June 21 to Wednesday, June 24, 2026

### RESEARCHERS MEETING

Wednesday, June 24 to Thursday, June 25, 2026

#### PRACTITIONERS MEETING

Thursday, June 25, 2026

OMNI INTERLOCKEN HOTEL || BROOMFIELD, COLORADO







## **ACKNOWLEDGEMENTS**

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 2024 Researchers Meeting. 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.

- Rodrigo Costa and Alyssa Provencio, who served as chairs of this year's Researchers
  Meeting. They both previously served as members of the Organizing Committee, and
  this year stepped into this leadership role with great enthusiasm. They invigorated the
  entire planning process with their dedication to rigorous, multidisciplinary research, and
  the entire research community has greatly benefited from their service.
- We are grateful for all the additional members of the Researchers Meeting Organizing Committee. Kyle Breen and Kristopher Young expertly served as lead session organizers this year. We also acknowledge the many contributions of Santina Contreras, Dontá Council, Oronde Drakes, Erica Gralla, Kanako Iuchi, Jennifer Lawrence, Melina Matos, Alexis Merdjanoff, Jason Rivera, Robert Soden, Alyssa Stansfield, Jennifer Trivedi, and Chandler Wilkins. These 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 offered their time and talent to ensure the successful execution of the Researchers Meeting.
- 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.



### **FUNDING SUPPORT**



The 2024 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.

## **2024 RESEARCHERS MEETING**





Natural Hazards Center Institute of Behavioral Science University of Colorado Boulder

1440 15th Street | Boulder, CO 80309-0483 USA hazctr@colorado.edu | (303) 735-5844

