

**Disaster PRIMR 2021
@ Texas A&M**



**University Engagement in Disaster Preparedness, Response, Innovation,
Mitigation, & Recovery**

AGENDA

(as of January 28, 2020)

January 31 - February 4, 2021

virtual from **TEXAS A&M UNIVERSITY**
College Station, Texas

Hosted by **TEXAS A&M UNIVERSITY** and the **TEXAS A&M UNIVERSITY SYSTEM**

Howdy and Welcome!

On behalf of the *Organizing Committee*, the *Steering Committee*, the *Programing Committee*, and our *Conference Partners*, we are very pleased to welcome you as our guests to **Disaster PRIMR 2021**, a conference on **Preparedness, Response, Innovation, Mitigation, and Recovery**, hosted virtually by **Texas A&M University (TAMU)** and the **Texas A&M University System (TAMUS)**. We are deeply honored and proud to host this inaugural conference. We have been committed to delivering an excellent program of keynote presentations, panel discussions, workshops, interactions, virtual tours, a poster session, and a student competition. The program includes an outstanding roster of speakers, who will speak with deep knowledge and wide experience on a diverse set of topics of critical importance, not only to the State of Texas, but to the Nation and the World. Furthermore, we hope you will take back with you, valuable data, information, knowledge (best practices), experience (lessons learned), and wisdom (insights) from a diverse range of fields, organizations, and perspectives. Finally, we will make every possible effort to ensure that your participation in the conference will be an enjoyable experience.

We sincerely hope that, in addition to enjoying the program that will be delivered at the conference, you will also enjoy our Texas Aggie virtual hospitality!

Welcome and Gig'Em!

Jorge Vanegas

Cory Arcak

Valentini Pappa

Conference Leadership

Many wonderful hazard and disaster leaders supported the vision and final program you see before you. We are honored to have such great collaborators and send a big thank you to the conference team.

CONFERENCE CO-CHAIRS



Jorge Vanegas

Dean of the College of Architecture
Director of the Institute for Sustainable Communities
Texas A&M University
[Represents Academic Affairs and the Built Environment]



Valentini Pappa

Assistant Director
Energy Institute, Division of Research
Texas A&M Engineering Experiment Station
Texas A&M University System
[Represents Research and the Texas A&M University System]



Cory Arcak

Director
MSC L.T. Jordan Institute for International Awareness
Texas A&M University
[Represents Student Affairs and Student Engagement]

ORGANIZING COMMITTEE

- **Cory Arcak**, Texas A&M University – Programming Committee
- **John T. Cooper, Jr.**, Texas A&M University – Steering Committee
- **Michelle Meyer**, Texas A&M University – Steering Committee
- **Valentini Pappa**, Texas A&M University System – Programming Committee
- **MacGregor Stephenson**, Texas Division of Emergency Management – Programming Committee
- **Jorge Vanegas**, Texas A&M University – Steering Committee

STEERING COMMITTEE

- **Jim Allison**, General Counsel for Texas County Judges and Commissioners Association
- **Christine Altendorf**, US Army Corps of Engineers - Engineering and Construction Division
- **Chris Bugbee**, OneStar Foundation
- **Natalie Coleman**, Texas A&M University - College of Engineering Graduate Student Representative
- **Elena Craft**, Environmental Defense Fund
- **Noel Estwick**, Prairie View A&M University - HBCU Network
- **Shawn Gibbs**, Texas A&M University - School of Public Health
- **Wes Highfield**, Texas A&M University at Galveston - Department of Marine and Coastal Environmental Science
- **Michael Love**, Houston Independent School District
- **Gerry Parker**, Texas A&M University - Bush School of Government & Public Service
- **Pam Plotkin**, Texas Sea Grant
- **Anna Thomas**, Texas Tech University - Wind Institute
- **Gary Webb**, University of North Texas - Department of Emergency Management & Disaster Science
- **Kelly Wellman**, Texas A&M University - Office of Sustainability
- **Gordon Wells**, University of Texas at Austin - Center for Space Research
- **Michelle Wyman**, Global Council for Science and the Environment

PROGRAMMING COMMITTEE

- **Wesley Bisset**, Texas A&M University - Veterinary Emergency Team
- **Mary Ann Covey**, Texas A&M University - Counseling and Psychological Services
- **Christa López**, Texas General Land Office
- **Jason Moats**, Texas A&M Engineering Extension Service
- **Bee Moorhead**, Texas Impact
- **Ashley Ross**, Texas A&M University at Galveston - Department of Marine and Coastal Environmental Science
- **Craig Rotter**, Texas A&M Agrilife Extension
- **Monica Sanders**, University of Delaware
- **Melissa Shehane**, Texas A&M University - Student Activities
- **April Taylor**, SCIPP and Chickasaw Nation
- **Kelly Villarreal**, Texas A&M University - 12th Can Student Representative
- **Charles White**, Charity Productions
- **Katya Wowk**, Texas A&M Corpus Christi - Harte Research Institute

Conference Access

<https://www.acelevents.com/e/DisasterPRIMR2021TexasAM>

Once you click on the Access Event link above, you'll be redirected to the Acelevents Virtual Platform for the event.

Acelevents will require you to use the email address that you used when registering for the event.

Additionally, you'll be prompted to establish a password the first time you enter the platform.

Please note – the event platform will not be live until 4:00 PM CST on Sunday January 31st however, you are encouraged to login and establish a password at least 30 minutes prior to the event start date/time.

For a better understanding of how the Acelevents virtual event platform functions, we encourage you to watch the following video: <https://support.acelevents.com/en/articles/4045754-intro-to-virtual-events-for-attendees>

Please use GOOGLE CHROME as your browser to access the event platform. Internet Explorer will NOT work.

For technical assistance contact:

Nicole Solecki - nicole.solecki@tamu.edu

Schedule Overview

Sunday, January 31				
4:00 pm	Poster Hall and Virtual Tours Available: TEEX Disaster City Training Facility & Houston Ship Channel Neighbors: A Toxic Tour			
Monday, February 1				
10:30 am	Conference Welcome and Opening Statements			
11:00 am	Keynote Presentation: Lessons from 2020: The Critical Role of Preparedness and Response with Nicolette Louissaint, Executive Director of Healthcare Ready			
12:00 pm	Break			
12:15 pm	Breakout Session 1.1 Preparedness for Disaster	Breakout Session 1.2 Response to Disaster	Breakout Session 1.3 Mitigating Disasters	Breakout Session 1.4 Recovery from Disaster
1:45 pm	Break			
2:00 pm	Poster Session 1			
2:30 pm	Workshop: Navigating Disaster Communications: Challenges and Conflicts		Panel: Challenging Resilience: A Multi Perspective Conversation	
4:00 pm	Wrap-up Discussion Day 1			
4:15 pm	Networking Lounges Open			
Tuesday, February 2				
11:00 am	Keynote Presentation: The Case for Diversity, Inclusion and Equity in Disaster Management with Chauncia Willis, Co-Founder and CEO of the Institute for Diversity and Inclusion in Emergency Management (I-DIEM)			
12:00 pm	Break			
12:15 pm	Breakout Session 2.1 Preparedness for Disaster	Breakout Session 2.2 Response to Disaster	Breakout Session 2.3 Mitigating Disasters	Breakout Session 2.4 Recovery from Disaster
1:45 pm	Break			
2:00 pm	Poster Session 2			
2:30 pm	Workshop: Challenges and Opportunities Related to Gender Diversity in Disaster Leadership		Panel: Meeting the Moment: Harnessing the Untapped Potential of Universities in Building Community Resilience	
4:00 pm	Wrap-up Discussion Day 2			
4:15 pm	Virtual Tour - TEEX Disaster City with Q&A and Networking Lounges Open			
Wednesday, February 3				
11:00 am	Keynote Presentation: Convergence: Coming Together to Advance Hazards and Disaster Research with Lori Peek, Director of the Natural Hazards Center and Professor of Sociology at the University of Colorado Boulder			
12:00 pm	Break			
12:15 pm	Breakout Session 3.1 Preparedness for Disaster	Breakout Session 3.2 Response to Disaster	Breakout Session 3.3 Mitigating Disasters	Breakout Session 3.4 Recovery from Disaster
1:45 pm	Break			
2:00 pm	Poster Session 3			
2:30 pm	Panel: Behavioral Health and Disasters: A Moderated Panel Discussion of the Challenges & Interventions for the Community, Responders, and Self		Panel: The Next Generation of Resilience and Sustainability Leaders: Our Perspectives	
4:00 pm	Wrap-up Discussion Day 3			
4:15 pm	Virtual Tour - Houston Ship Channel Neighbors: A Toxic Tour with Q&A and Networking Lounges Open			
Thursday, February 4				
11:00 am	Keynote Presentation: Reimagining Effective Disaster Philanthropy with Patricia McIlreavy, President and CEO of the Center for Disaster Philanthropy			

12:00 pm	Break			
12:15 pm	Breakout Session 4.1 Preparedness for Disaster	Breakout Session 4.2 Response to Disaster	Breakout Session 4.3 Mitigating Disasters	Breakout Session 4.4 Recovery from Disaster
1:45 pm	Break			
2:00 pm	Student Competition Results and Awards & Poster Wrap Up			
2:30 pm	Workshop: Utilizing Community Engagement to Improve Local Resilience to Hazardous Events		Panel: Federal and State Coordination: How We Can Work Better Together	
4:00 pm	Wrap-up Discussion and Thank you			
4:30 pm	Adjourn Conference			

Sunday, January 31, 2021

4:00 pm **Poster Hall Opens**

Monday, February 1, 2021

10:30 am **Welcome** **Jorge Vanegas**, *Dean, College of Architecture, Texas A&M University*
MacGregor Stephenson, *Chief of Policy and Research, Texas Division of Emergency Management, Texas A&M University System*

11:00 am **Keynote** **Lessons from 2020: The Critical Role of Preparedness and Response**
Nicolette Louissaint, *Executive Director of Healthcare Ready*

12:00 pm **Break**

12:15 pm **Concurrent Breakout Sessions**

1.1: Preparedness for disasters - Moderator John T. Cooper, Jr.

The Power of Grassroots Partnerships in a Pandemic (30-minute Discussion)

Angela Clendenin, *Department of Epidemiology & Biostatistics, Texas A&M School of Public Health, Texas A&M School of Public Health*

Rebecca Fischer, *Department of Epidemiology & Biostatistics, Texas A&M School of Public Health, Texas A&M School of Public Health*

Civic Engagement Asset Blueprint (30-minute Grassroots Dialogue)

Charles X. White, *Civic Engagement Asset Blueprint Charity Productions, Practitioner School Safety Consultant, Tekoa Academy*

1.2: Mitigation of Disasters - Moderator MacGregor Stephenson

Next Generation Intelligent Information and Communication Systems for Flood Preparedness and Mitigation (15-minute Presentation)

Ibrahim Demir, *Civil and Environmental Engineering, University of Iowa*

Large Scale Wireless Networks for Disaster Preparedness and Mitigation

(15-minute Presentation)

Santosh Ganji, *Computer Engineering, Texas A&M University*

Gandhali Prakash Juvekar, *Power Engineer, SEL, Inc*

Ask Me about ReDiReCT: The Disaster Response Toolkit for your Phone (15-minute Presentation)

Martin Mufich, *College of Nursing, Texas A&M University and Texas A&M University Health Science Center*

Carlos Ortiz, Jr., *College of Nursing, Texas A&M University Health Science Center*

Sheila Green, *Medical Sciences Library, Texas A&M University*

Towards an AI-driven Framework for Multi-scale Urban Flood Resilience Planning and Design

(15-minute Presentation)

Xinyue Ye, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Shaohua Wang, *Texas A&M University*

Zhipeng Lu, *Department of Architecture, Texas A&M University*

Yang Song, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Siyu Yu, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

1.3: Response to Disasters - Moderator Melissa Shehane

Communities Using Social Media to Partner in Disaster Response *(15-minute Presentation)*

Keri K. Stephens, *Department of Communication Studies, The University of Texas at Austin*

Brett W. Carlson, *University of South Carolina*

Dhiraj Murthy, *School of Journalism, The University of Texas at Austin*

W. Roth Smith, *Department of Communication Studies, Illinois State University and The University of Texas at Austin*

Just Technological Enough: Planning for transformative disaster resilience *(15-minute presentation)*

Bethany Cutts, *Department of Parks, Recreation, and Tourism Management, North Carolina State University*

Intelligent Spatial Decision Support System for Enhancing Disaster Resilience *(15-minute Presentation)*

Zhe Zhang, *Department of Geography, Texas A&M University*

1.4: Recovery from Disasters - Moderator Craig Rotter

Recover Hampton Roads: An Innovative University-Community Foundation Partnership

Preparing for Recovery *(15-minute Presentation)*

Joshua G. Behr, *Virginia Modeling, Analysis and Simulation Center (VMASC), Old Dominion University*

Rafael Diaz, *VMASC at Old Dominion University*

Disaster Recovery Alternative Housing Study *(15-minute Presentation)*

Shonda Mace, *Texas General Land Office*

James Ariail, *Hagerty Consulting*

John Squerciati, *Dewberry*

Ashley Saulcey, *Hagerty Consulting*

The Role of Faith-Based Congregations during Disaster Response and Recovery: A Case Study of Katy, Texas *(15-minute Presentation)*

Julie Elliott, *Emergency Management Coordinator at the University of North Texas*

Gary Webb, *Department of Emergency Management and Disaster Science, University of North Texas*

1:45 pm

Break

2:00 pm

Posters Session and Networking

2:30 pm

Concurrent Workshops and Panels

Workshop: Navigating Disaster Communications: Challenges and Conflicts

Risk communication faces numerous challenges in what some call the 'post-truth' era we are living in – a time where 'alternative' facts, political ideologies, and feelings have more weight than objective evidence. In the context of today's extreme political polarization, we've seen: media biases detract from the accuracy and credibility of disaster communication from official sources; risk messages met with skepticism by some who are swayed by partisan rhetoric and/or distrust in science; and conflicts emerge among groups when issues related to risk are politicized, as with COVID-19 and climate change. How do we effectively communicate about disasters in this environment? How do we earn the trust of our citizens who may be confused as to what to believe? Learn from the experiences and expertise of a diverse panel that includes mitigation and recovery specialists and practitioners, a communication researcher, and a community advocate.

Moderator: Christa López, Deputy Director Community Development and Revitalization at Texas General Land Office

Rev. Gregory Han, Director of Interfaith Relations & Education at Interfaith Ministries for Greater Houston

Kirby Goidel, Director of the Public Policy Research Institute and Professor and Fellow in the Department of Communication at Texas A&M University

Michelle Tubbleville, Special Projects Coordinator, Orange County Office of Emergency Management and Executive Director for Orange County Disaster Rebuild

Leslie Chapman-Henderson, President and Chief Executive Officer of Federal Alliance for Safe Homes (FLASH)

Panel: Challenging Resilience: A Multi Perspective Conversation

The multi-hazard, multi-sectorial, multi-level and multidisciplinary realities of the last decades, from Hurricanes Katrina to Maria, the California wildfires, the Puerto Rico Earthquakes, the Covid -19 Pandemic, the murder of George Floyd and the Black Lives Matter movement, require the deep engagement and understanding of a multiplicity of perspectives. This level of convergence can only be achieved through the design of a new architecture of relationships. In fact, some have called the XXI Century, a time of Relational Science! However, the number of spaces for this much needed multi-sectorial dialogue continues to lag in quantity and quality of supply. This Panel attempts to open that space, joining the perspectives of three different landscapes, sectors and extreme events in an effort to "challenge" current definitions of resilience. This is an effort to encourage critical thinking and the decolonization of resilience knowledge and the innovative redesign of its most important institutions.

Moderator: Joan Asencio, Community Organizer at RISE Puerto Rico

Duaba Unenra, Director at the Confluence Studio, Minneapolis, Minnesota

Faith Hall, Founder & Consultant with the Dominion Advisory Group

Sarah Lipuma, RISE student, Nicholas School of the Environment, Duke University

Ibrahim Lopez, RISE student and Community Organizer at Northeastern University School of Public Policy and Planning

4:00 pm **Closing:** **John T. Cooper, Jr.**, Assistant Vice President of Public Partnership and Outreach at Texas A&M University

4:15 pm **Networking Lounges Open**

Tuesday, February 2, 2021

11:00 am **Welcome:** **Valentini Pappa**, Assistant Director of Education, Texas A&M Energy Institute

11:05am **Keynote:** **The Case for Diversity, Inclusion and Equity in Disaster Management**
Chauncia Willis, Co-Founder and CEO of the Institute for Diversity and Inclusion in Emergency Management (I-DIEM)

12:00 pm **Break**

12:15 pm **Concurrent Breakout Sessions**

2.1: Preparedness for disasters - Moderator Jason Moats

Innovations in Preparedness: A Successful Wildfire Drill in Texas with Community Participation (30-minute Discussion)

Keri Stephens, Department of Communication Studies, The University of Texas at Austin

Pete Martinez, Organizer of the Wildfire Drill Committee, Comanche Trail Community Association

Brigid Shea, Travis County Commissioner, Pct 2

Will Boettner, PG CA, Fire Education Outreach Coordinator/PIO, Travis County Fire Marshal's Office

Strengthening AgriLife Extension's Response Network in Times of Need

(30-minute Presentation)

Monty C. Dozier, Disaster Assessment and Recovery, Texas A&M Agrilife Extension Service

Rachel Bauer, Texas A&M AgriLife Extension Service

2.2: Mitigation of Disasters - Moderator Gary Webb

Planning for Green Infrastructure: An evaluation of 52 comprehensive plans in Gulf Coast region (15-minute Presentation)

Trang Le, Department of Recreation, Park and Tourism Sciences, Texas A&M University

Tho Tran, Department of Landscape Architecture and Urban Planning, Texas A&M University

Wind hazard risk assessment and mitigation for residential construction to support community decision-making (15-minute Presentation)

Fatemeh Orooji, School of Engineering and Applied Sciences, Western Kentucky University

Arash Taghinezhad, Bert S. Turner Department of Construction Management, Louisiana State University

Carol J. Friedland, Bert S. Turner Department of Construction Management, Louisiana State University

Shifat P. Mithila, Department of Computer Science and Engineering, Louisiana State University

Jiyoung Lee, Department of Geography and Anthropology, Louisiana State University

Building Code Research and Public Awareness Initiative – No Code. No Confidence. – Inspect2Protect.org (15-minute Presentation)

Leslie Chapman-Henderson, Federal Alliance for Safe Homes (FLASH)

Using Environmental Justice to Think About Equity in FEMA HMA Participation: A Survey of State Hazard Mitigation Officers (SHMOs) (15-minute Presentation)

Olivia Vila, Parks, Recreation, & Tourism Management, North Carolina State University

Gavin Smith, Department of Landscape Architecture, North Carolina State University

Samata Gyawali, Department of Landscape Architecture, North Carolina State University

Samiksha Bhattarai, Department of Landscape Architecture, North Carolina State University

2.3: Response to Disasters - Moderator Christa López

Disaster Research Response (DR2) for Characterization Exposure Pathways after Environmental Emergencies (30-minute Discussion)

Ivan Rusyn, Department of Veterinary Integrative Biosciences, Texas A&M University

Transdisciplinary Post-Disaster Research in a Quarantined World (30-minute Discussion)

Samuel Reed, Forest Ecology at the University of Minnesota Twin Cities

Jesann Gonzalez Cruz, Natural Resources and Environmental Sciences at the University of Illinois Urbana Champaign

Michael Stablein, Agricultural and Biological Engineering at the University of Illinois Urbana Champaign

Raine Walters, Water Resources at the University of Idaho

2.4: Recovery from Disasters - Moderator Noel Estwick

Stories of Resilience - Leading the Way on Innovative Disaster Collaboration (30-minute Discussion)

Damian Morales, Disaster Services, OneStar Foundation

Courtney Goss, Texas Division of Emergency Management

#INSPIRE: Integrating Science and Practice to Improve Resilience

(15-minute Presentation)

Michelle Meyer, Department of Landscape Architecture and Urban Planning, Texas A&M University

Josh Roberts, Texas Division of Emergency Management

The REDDY Model to Online Disaster Directory Creation (15-minute Presentation)

Marcia L. Montague, Special Education, Texas A&M University

Laura M. Stough, Department of Educational Psychology, Texas A&M University

Kayla S. Sweet, Special Education Teacher, Hays CISD

Isabella Miracle, Center on Disability and Development, Texas A&M University

1:45 pm

Break

2:00 pm

Posters Session and Networking

2:30 pm

Concurrent Workshops and Panels

Workshop: Challenges and Opportunities Related to Gender Diversity in Disaster Leadership

Emergency management is not diverse. Specifically, 82% of leaders in emergency management are white and male. As disasters worsen and society changes, this crucial field remains unknown. Research indicates that disasters disproportionately affect persons with access and functional needs, increase poverty rates, widen the racial wealth gap, and push women back into traditional gender roles. More holistic resilience and equity may be possible if disaster management leadership would more closely resemble the demographics of the country and include diverse perspectives. Yet, how do we get there? This participatory workshop will gather audience thoughts and ideas on four questions specifically about increasing gender diversity - specifically attending to women of color and women with access and functional needs - in emergency management professional roles: 1) What are the barriers to more women, people of color, and those with different abilities to becoming leadership in emergency management?; 2) What is going well in this regard?; 3) What needs to change; and 4) What do we do immediately? The result will be a summary identified barriers, opportunities, and next steps to promote more diversity in the field.

Organizer: Michelle Meyer, Director of the Hazard Reduction and Recovery Center at Texas A&M University

Christa Lopez, Deputy Director of Community Development and Revitalization, Texas General Land Office

Jaimie Masterson, Associate Director of Texas Target Communities at Texas A&M University

Elyse Zavar, Assistant Professor of Emergency Management and Disaster Science at University of North Texas

Panel: Meeting the Moment: Harnessing the Untapped Potential of Universities in Building Community Resilience

With more than 1,700 universities in the United States, and an estimated 28,000 worldwide, the Global Council for Science and the Environment (GCSE) recognizes an underutilized opportunity to engage the university-based scientific enterprise to enhance community resilience. At this moment in time, accentuated by the devastating impact of the COVID-19 pandemic, stronger linkages between the university knowledge enterprise and decision-makers can lead to mutual benefit. This panel discussion will highlight examples of university engagement in community resilience, bringing together pairs of university leaders with community partners from three different regions, to explore the conditions that make such partnerships possible to begin to map a path toward replicability and durability across higher education.

Moderator: Erica Goldman, Deputy Director, Global Council for Science and the Environment

Patricia Solis, Executive Director, Knowledge Exchange for Resilience at Arizona State University

Marty Matlock, Executive Director, University of Arkansas Resiliency Center

Erica Smithwick, Director of the Ecology Institute and Center for Landscape Dynamics, Penn State University

Peter Nierengarten, Environmental Director, City of Fayetteville, Arkansas

Nathan Smith, Chief Program Officer, Phoenix Rescue Mission

Nathan Fregien, College of the Menominee Nation

Christopher Caldwell, Interim President, College of the Menominee Nation

4:00 pm

Closing:

Michelle Meyer, Director, Hazard Reduction & Recovery Center, Texas A&M University

4:15 pm

Virtual Field Visit and Live Interviews

Location: TEEX Disaster City followed by Q&A with Jason Moats

4:15 pm

Networking Lounges Open

Wednesday, February 3, 2021

11:00 am **Welcome:** **Michelle Meyer**, *Director, Hazard Reduction & Recovery Center, Texas A&M University*

11:05 am **Keynote:** **Convergence: Coming Together to Advance Hazards and Disaster Research**
Lori Peek, *Director of the Natural Hazards Center and Professor in the Department of Sociology at the University of Colorado Boulder*

12:00 pm **Break**

12:15 pm **Breakout Sessions**

3.1: Preparedness for disasters - Moderator Craig Rotter

Moving Flood Preparedness and Education Forward for Texas (15-minute Presentation)

Keri K. Stephens, *Department of Communication Studies, The University of Texas at Austin*

Nancy Carlson, *Department of Communication Studies, The University of Texas at Austin*

Kendall P. Tich, *Department of Communication Studies, The University of Texas at Austin*

Lessons from Emergency Response for IT and Cybersecurity (15-minute Presentation)

Andrew Jarret, *Program Manager, Cyber Readiness Center (CRC)*

3.2: Mitigation of Disasters - Moderator Katya Wowk

Collaborative Partnerships as a Strategy for Improving Disaster Education Programming at 1890 Land-Grant Universities (15-minute Presentation)

Noel M. Estwick, *Department of Agriculture, Nutrition and Human Ecology, Prairie View A&M University*

Jerrel V. Moore, *School of Nursing, Prairie View A&M University*

Preservation at the Intersections: Patterns of Disproportionate Multi-Hazard Risk and Vulnerability in Louisiana's Historic African American Cemeteries (15-minute Presentation)

Jennifer Blanks, *Department of Landscape Architecture and Urban Planning and Hazard Reduction and Recovery Center, Texas A&M University*

Joy Semien, *Department of Landscape Architecture and Urban Planning, Hazard Reduction and Recovery Center, Texas A&M University*

Alexander Abuabara, *Department of Landscape Architecture and Urban Planning, Hazard Reduction and Recovery Center, Texas A&M University*

Andrea Roberts, *Department of Landscape Architecture and Urban Planning, Texas Freedom Colonies Project, Texas A&M University*

3.3: Response to Disasters - Moderator Monica Sanders

The Impact of Hurricane Harvey on the Retail Gasoline Industry

(15-minute Presentation)

Eric Lewis, *Bush School of Government and Public Service, Texas A&M University*

Ben Klopach, *Department of Economics, Texas A&M University*

Fernando Luco, *Department of Economics, Texas A&M University*

Food Access and its relation to Critical Infrastructure after Hurricane Harvey

(15-minute Presentation)

Nathanael Rosenheim, *Hazard Reduction and Recovery Center and Department of Landscape Architecture and Urban Planning in the College of Architecture at Texas A&M University*

Maria Watson, *Hazard Reduction and Recovery Center and Department of Landscape Architecture and Urban Planning in the College of Architecture at Texas A&M University*

John Casellas Connors, *Department of Geography in the College of Geoscience at Texas A&M University*

Mastura Safayet, *Department of Geography in the College of Geoscience at Texas A&M University*

Characteristics of Texas Communities Frequently Impacted by Flash Flooding

(15-minute Presentation)

Shi Chang, Department of Civil & Environmental Engineering, Texas A&M University

Rohan Singh Wilkho, Department of Civil & Environmental Engineering, Texas A&M University

Nasir Gharaibeh, Department of Civil & Environmental Engineering, Texas A&M University

Garett Sansom, Department of Environmental and Occupational Health, Texas A&M University

Francisco Olivera, Department of Civil & Environmental Engineering, Texas A&M University

Michelle Meyer, Hazard Reduction & Recovery Center, Department of Landscape Architecture and Urban Planning, Texas A&M University

Disaster Resilient Food Energy Water Nexus Systems (15-minute Presentation)

Sengupta, Debalina, TEES Gas and Fuels Research Center, WEF Nexus Coordinator, Texas A&M Energy Institute, Artie McFerrin Department of Chemical Engineering, Texas A&M University/Texas A&M Engineering Experiment Station (TEES)

3.4: Recovery from Disasters - Moderator Ashley Ross

Disaster Recovery for Senior Officials (90-minute Professional Development Workshop)

David Spruiell, Texas A&M Engineering Extension Service (TEEX)

David Pointon, Texas A&M Engineering Extension Service (TEEX)

Frank Patterson, Texas A&M Engineering Extension Service (TEEX)

1:45 pm

Break

2:00 pm

Posters Session and Networking

2:30 pm

Concurrent Panels

Panel: Behavioral Health and Disasters: A moderated panel discussion of the challenges & interventions for the community, responders, and self

This 90-minute panel session focuses on the disaster-based behavioral health challenges and practical strategies to mitigate them. While the focus is on disasters in general, our session will carefully address issues identified by the ongoing COVID pandemic. The session panelists are professionals who are actively engaged in behavioral health research and practice. The goals of the session are to 1) Provide participants with a general overview of the types of behavioral health challenges associated with disasters, 2) Discuss specific behavioral health challenges observed as a result of the SARS-CoV-2 global pandemic (e.g. pandemic fatigue, compassion fatigue, moral injury, etc), 3) Provide participants best practices for interventions and strategies that can help them cope with behavioral health challenges brought on by disasters

Moderator: Jason Moats, Director, TEEX Testing and Innovation Center, Texas A&M Engineering Extension Service

Lisa Sullivan, Consultant at Texas Suicide Prevention Center

Jay Maddock, Interim Director, Institute for Improving Health through Agriculture, Chief Wellness Officer, Texas A&M University

Carly McCord, Director of Telebehavioral Care Department of Psychiatry, Texas A&M University College of Medicine

Iris Carillo, Assistant Director, Director of Diversity and Inclusion, CAPS - Counseling & Psychological Services, Texas A&M University

Richard Costa, Clinical Associate Professor of Psychiatry, LSUHSC School of Medicine, Department of Psychiatry

Panel: The Next Generation of Resilience and Sustainability Leaders: Our Perspectives

Current students and recent alumni will reflect on their university experiences and how these experiences shaped their capacity as future leaders in resilience and sustainability. They will address questions such as: How did/do you contribute to resilience or disaster or sustainability as a student? What does your participation in these efforts offer you and other students? How can universities do better to encourage more students to engage in resilience and sustainability efforts?

Moderator: Natalie Coleman, Urban Resilience.AI Lab, Zachry Department of Civil and Environmental

Engineering, Texas A&M University

Rebekah Manon, Operations Analyst at AC Disaster Consulting

Asia Dowtin, Urban and Community Forestry, Michigan State University

Paige Wirth, Environmental Geoscience, Texas A&M University

4:00 pm **Closing:** **John T. Cooper, Jr.** Assistant Vice President of Public Partnership and Outreach at Texas A&M University

4:15 pm **Virtual Field Visit and Live Interviews: Houston Ship Channel Neighbors: A Toxic Tour**

4:15 pm **Networking Lounges Open**

Thursday, February 4, 2021

11:00 am **Welcome:** **Cory Arcak**, Director, MSC L.T. Jordan Institute at Texas A&M University

11:05 am **Keynote:** **Reimagining Effective Disaster Philanthropy**
Patricia McIlreavy, President and CEO of the Center for Disaster Philanthropy

12:00 pm **Break**

12:15 pm **Concurrent Breakout Sessions**

4.1: Preparedness for disasters - Moderator Christa López

Assessing the Effects of Climate Change on Cryptosporidiosis: Integrating Soil Quality, Natural Disasters, and Infectious Disease Using a One Health Approach

(15-minute Presentation)

John Carew, Ibn Zohr University, Agadir, Morocco

Benjamin Clark, School of Engineering and Applied Sciences, University of Virginia

Resilient Texas Geodesign Game: Co-creating a Market-Driven Adaptation Plan for Climate Extremes (15-minute Presentation)

Hope Hui Rising, Department of Landscape Architecture and Urban Planning, Texas A&M University

Ryun Jung Lee, Department of Landscape Architecture and Urban Planning, Texas A&M University

Abimbola Olorode, TAMU Department of Landscape Architecture and Urban Planning, Texas A&M University

Hrishikesh Ballal, Founder, Geodesignhub,

Doug Wunnerburger, Department of Landscape Architecture and Urban Planning, Texas A&M University

A Comprehensive Approach to Identify Shoreline Change: A Study of Kuakata, Bangladesh (15-minute Presentation)

Nazla Bushra, Department of Oceanography and Coastal Sciences, Louisiana State University

Rubayet Bin Mostafiz, Department of Oceanography and Coastal Sciences, Louisiana State University

4.2: Mitigation of Disasters - Moderator Katya Wowk

Disparities in Disaster Preparedness Actions and Accessibility Relating to Critical Lifeline Services (15-minute Presentation)

Natalie Coleman, Urban Resilience AI Lab, Zachry Department of Civil and Environmental Engineering, Texas A&M University

Amir Esmailian, Urban Resilience AI Lab, Zachry Department of Civil and Environmental Engineering, Texas A&M University

Ali Mostafavi, Urban Resilience AI Lab Zachry Department of Civil and Environmental Engineering, Texas A&M University

An examination of the social-psychological drivers of homeowner wildfire mitigation

(15-minute Presentation)

Benjamin Ghasemi, *Human Dimensions of Natural Resources Lab., Department of Rangeland, Wildlife, and Fisheries Management, Agriculture and Life Sciences, Texas A&M University*

Gerard T. Kyle, *Human Dimensions of Natural Resources Lab., Department of Rangeland, Wildlife, and Fisheries Management, Texas A&M University*

4.3: Response to Disaster - Moderator Kelly Wellman

The 2020 Atlantic Hurricane Season Lived up to predictions and Shattered

Records! *(15-minute Presentation)*

Ali Fares, *Water Security & Water-Food-Energy Nexus, College of Agriculture and Human Sciences, Prairie View A&M University*

Evaluation of Performance of Multi-Radar Multi-Sensor (MRMS) product in

Monitoring Extreme Precipitation in Harris County, Texas *(15-minute Presentation)*

Ripendra Awal, *College of Agriculture and Human Sciences, Prairie View A&M University*

Ali Fares, *Water Security & Water-Food-Energy Nexus, College of Agriculture and Human Sciences, Prairie View A&M University*

Hamideh Habibi, *College of Agriculture and Human Sciences, Prairie View A&M University*

Evacuation Planning for Alternative Fuel Vehicles *(15-minute Presentation)*

Denissa Sari Darmawi Purba, *Civil and Environmental Engineering, University of Illinois at Urbana-Champaign*

Eleftheria Kontou, *Civil and Environmental Engineering, University of Illinois at Urbana-Champaign*

Chrysafis Vogiatzis, *Industrial and Enterprise Systems Engineering, University of Illinois at Urbana-Champaign*

4.4: Recovery from Disasters - Moderator MacGregor Stephenson

Mapping and Communication of Flood Risk with Computer Vision and

Community Science *(30-minute Discussion)*

Amir H. Behzadan, *Department of Construction Science, Texas A&M University*

Courtney Thompson, *Department of Geography, Texas A&M University*

Zhe Zhang, *Department of Geography, Texas A&M University*

Michelle Meyer, *Department of Landscape Architecture and Urban Planning, Hazard Reduction and Recovery Center, Texas A&M University*

Ms. Bahareh Alizadeh, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Diya Li, *Department of Geography, Texas A&M University*

Julia Hillin, *Department of Geography, Texas A&M University*

1:45 pm

Break

2:00 pm

Student Competition Results and Awards

Cory Arcak, *Director, MSC L.T. Jordan Institute for International Awareness*

Poster Session Concluding Remarks

Valentini Pappa, *Assistant Director, Texas A&M Energy Institute*

2:30 pm

Workshop: Utilizing Community Engagement to Improve Local Resilience to Hazardous Events

There have been calls to increase the quantity of pre and post-disaster research in recent years from both the academic and applied public health community. Rapid and credible hazard research is now seen as an essential step for protecting the wellbeing of communities and necessary for increasing trust of governmental response agencies among affected populations. This research is especially needed for communities of color, which traditionally experience higher negative public health outcomes and disaster impacts. Conducting meaningful research requires community engagement at all stages of research to properly conclude and disseminate research findings. In order to accurately and swiftly understand the environmental conditions and public health needs within fence line communities, the Texas A&M Superfund Center (SRP) has partnered with numerous non-profit organizations within Houston Ship Communities to collect (a majority of the communities we work with are marginalized, minority demographically, or are lower income) and synthesize data and co-learn with communities about the risks associated with hazardous events. This session will highlight specific hazardous events that occurred, the role community engagement played, as well as steps that are being taken to increase local resilience. Further, an emphasis will be placed on some best-practices and bi-directional communication pathways that have been developed when working with community/academic partnerships as well as some potential pitfalls.

Galen Newman, Associate Professor and Director of the Center for Housing and Urban

Development in the Department of Landscape Architecture and Urban Planning at Texas A&M University

Garett Sansom, Research Assistant Professor, Department of Environmental and Occupational Health School of Public Health, Texas A&M University

Leanne Fawkes, Graduate Research Assistant, Department of Environmental and Occupational Health, School of Public Health, Texas A&M University

Conversation: Federal and State Coordination: How We Can Work Better Together

Anthony Semento, Director of Contingency Operations, Southwestern Division, U.S. Army Corps of Engineers

4:00 pm

Closing: **Jorge Vanegas**, Dean, College of Architecture at Texas A&M University

4:30 pm

Adjourn

Poster Titles

Analysis of Per- and Polyfluoroalkyl Substances in Houston Ship Channel Following the Intercontinental Terminals Company Fire Incident Using Ion Mobility Mass Spectrometry

Alan Valdiviezo, *Department of Veterinary Integrative Biosciences, Texas A&M University*

Noor Aly, *Department of Veterinary Integrative Biosciences, Texas A&M University*

Yu-Syuan Luo, *Department of Veterinary Integrative Biosciences, Texas A&M University*

Gaston Casillas, *Department of Environmental and Occupational Health, Texas A&M University, Center for Disease Control and Prevention*

Erin Baker, *Department of Chemistry, North Carolina State University*

Ivan Rusyn, *Department of Veterinary Integrative Biosciences, Texas A&M University*

Assembling Micro-Scale Data on Flash Flood Events

Rohan Singh Wilkho, *Department of Civil & Environmental Engineering, Texas A&M University*

Nasir Gharaibeh, *Department of Civil & Environmental Engineering, Texas A&M University*

Lei Zou, *Department of Geography, Texas A&M University,*

Shi Chang, *Department of Civil & Environmental Engineering, Texas A&M University*

Catalyzing Proactive Climate Adaptation with Green Jobs at the Nexus of Water, Food, and Energy Terminal Company Fire

Hope Hui Rising, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Ryun Jung Lee, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Abimbola Olorode, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Hrishikesh Ballal, *Founder, Geodesignhub,*

Doug Wunnerburger, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Climate Adaptive Design Game Workshop for Regenerating the United States-Mexico Borderlands

Hope Hui Rising, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Ryun Jung Lee, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Abimbola Olorode, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Hrishikesh Ballal, *Founder, Geodesignhub,*

Doug Wunnerburger, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Comparing Regional Drivers of Toxics Transferal Risk: Applying the Toxics Mobility Vulnerability Index in San Diego County, CA; Harris County, TX; and the State of Rhode Island

Matthew Malecha, *Texas A&M University Superfund Research Center*

Galen Newman, *Center for Housing and Urban Development, Department of Landscape Architecture and Urban Planning, Texas A&M University*

Jennifer Horney, *University of Delaware*

Ibraheem Karaye, *University of Delaware*

Scott Frickel, *Brown University*

Thomas Marlow

Iya Zaslavsky, *Spatial Information Systems Laboratory, University of California, San Diego*

Keith Pezzoli, *Bioregional Center for Sustainability Science, Planning and Design, University of California, San Diego*

Dual Plagues of the 21st Century: Complicating COVID-19 Response with Innovative Approaches to Desert Locust Swarms

John Carew, *Ibn Zohr University, Agadir, Morocco*

Sophie Bardetti, *Middlebury College*

Environmental impacts of Hurricane Florence flooding in Eastern North Carolina: Temporal analysis of contaminant distribution and potential human health risks

Noor Aly, *Texas A&M University*

Gaston Casillas, *Texas A&M University*

Yu-Syuan Luo, *Texas A&M University*

Thomas J. McDonald, *Texas A&M University*

Terry L. Wade, *Texas A&M University*

Weihshueh A. Chiu, *Texas A&M University*

Ivan Rusyn, *Department of Veterinary Integrative Biosciences, Texas A&M University*

Evaluating Vulnerability to Flood-Induced Chemical Contaminant Releases through Integration of Geospatial Data and Hydrodynamic Simulations

Sharmila Bhandari, *Texas A&M University*

Kevin Fries, *OneConcern, Inc., Menlo Park, California*

Feyera Hirpa, *OneConcern, Inc., Menlo Park, California*

Weihshueh A. Chiu, *Texas A&M University*

Exposure to Lead-Contaminated Drinking Water in Bryan and College Station Public Parks

Leanne Fawkes, *Department of Environmental and Occupational Health, School of Public Health, Texas A&M University*

Anjali Katare, *Texas A&M University*

Garett Sansom, *Department of Environmental and Occupational Health School of Public Health, Texas A&M University*

Geospatial and Semantic Mapping Platform for Massive Disaster Related Scientific Publication Search

Jiaxin Du, *Department of Landscape Architecture and Urban Planning, Texas A&M University*

Geospatial VR: A Web-based Virtual Reality Framework for Collaborative Disaster Simulations

Yusuf Sermet, *Hydroscience & Engineering, University of Iowa*

Ibrahim Demir, *Civil and Environmental Engineering, University of Iowa*

Historical Spatial and Temporal Distribution of Legacy Contaminants in Galveston Bay and the Houston Ship Channel (GB/HSC) – a systematic evidence map

Krisa Camargo, *Texas A&M University*

Margaret Foster, *Texas A&M University*

Brian Buckingham, *Texas A&M University*

Thomas J. McDonald, *Texas A&M University*

Weihshueh A. Chiu, *Texas A&M University*

Integrating Prediction Models and Urban Analytics into Scenario-based Resilient Design

Zhihan Tao, *Urban Planning & Regional Science, Texas A&M University*

Galen Newman, *Center for Housing and Urban Development, Department of Landscape Architecture and Urban Planning, Texas A&M University*

Karishma Joshi, *Texas A&M University*

Karishma Joshi, *Texas A&M University*

Jiali Liu, *MLA, Texas A&M University*

Youjung Kim, *Texas A&M University*

Kevin Fries, *One Concern*

Intercalibration Comparison Study: Targeted GC/MS Compared to Untargeted Ion Mobility/MS

Terry Wade, Texas A&M University

Gopal Bera, Texas A&M University

James Dodds, North Carolina State University

Erin S. Baker, North Carolina State University

Nearby Nature and Post-Traumatic Stress Disorder: Evidence from Hurricane Affected Communities

Rui Zhu, Texas A&M University

Galen Newman, Center for Housing and Urban Development, Department of Landscape Architecture and Urban Planning, Texas A&M University

Dongying Li, Texas A&M University

Post-Harvey: Status of Sediment Contaminants along the upper Houston Ship Channel, Texas

Gopal Bera, Texas A&M University

Tim Dellapenna, Texas A&M at Galveston

Jose Sericano, Texas A&M University

Kusumica Mitra, Texas A&M University

Terry L. Wade, Texas A&M University

Anthony Knap, Texas A&M University

Resilience through Regeneration: An Engagement and Performance-based Approach to Repurposing Vacant Community Lots with Green Infrastructure

Rui Zhu, Texas A&M University

Dingding Ren, Texas A&M University

Xueqi Song, Texas A&M University

Yangdi Wang, Texas A&M University

Spatial and Temporal Distribution of Surface Water Quality Contaminants after The Intercontinental Terminal Company Fire

Suji Jang, Texas A&M University

Thomas J. McDonald, Texas A&M University

Sharmila Bhandari, Texas A&M University

Ivan Rusyn, Texas A&M University

Weihshueh A. Chiu, Texas A&M University

Transport and Deposition of Contaminated Sediment in the Upper Houston Ship Channel by Coastal Hazards

James Kaihatu, Texas A&M University

Mikyoungh Jun, University of Houston

Gopal Bera, Texas A&M University

Terry Wade, Texas A&M University

Anthony Knap, Texas A&M University

Thank you to our partners!

On behalf of the *Organizing Committee*, the *Steering Committee*, and the *Programing Committee*, we would like to express our deepest appreciation to each of our partners and their respective organizations, for support, active involvement, and valuable contribution. We could not have organized the conference without your participation, so we are grateful for your support, involvement, and contribution.

Thank you, and Gig 'Em!

Jorge Vanegas

Cory Arcaak

Valentini Pappa



