2024 NIST-NSF Disaster Resilience Research Symposium Agenda

August 20 - 21, 2024

ET	CT	MT	PT	Day 1: August 20, 2024			
10:00	9:00	8:00	7:00	Welcome from the Symposium Co-Chairs			
10:05	9:05	8:05	7:05	Opening Remarks from Joannie Chin (NIST)			
10:15	9:15	8:15	7:15	*Keynote #1: From Cascading Disruptions to Resilient Integration: Reconciling Hazards, Technology, and Environment Interactions with Network Principles*			Rae Zimmerman
11:00	10:00	9:00	8:00	*15 min break*			
Concurrent Sessions				**Track 1: Infrastructure and Community Resilience** Session 1	**Speaker(s)**	**Track 2: Windstorm - Hurricane and Coastal** Session 1	**Speaker(s)**
11:15	10:15	9:15	8:15	*Assessing the Utility of Safe-to-Fail Design to Improve Climate Hazards Resilience of Interdependent Infrastructure Systems*	Giuseppe Mascaro	*Characterization of Hurricane Boundary Layer Turbulence for Wind Hazard Mitigation*	Marco Giometto
11:35	10:35	9:35	8:35	*Resilient Power Infrastructure in Islanded Communities in a Changing Climate*	Jorge Gonzalez-Cruz, Masoud Ghandehari	*Enhancing Windstorm Resilience of Coastal Communities Through Ultra-High Performance Glass Fiber Reinforced Polymer Concrete Seawalls*	Prannoy Suraneni
11:55	10:55	9:55	8:55	*Place-Based, Human-Centered Networks to Enhance Community Resilience and Equity*	Chen Chen, Katherine Idziorek	*Enhancing Coastal Resilience through Participatory Transformation of Barrier Islands*	Casey Dietrich
12:15	11:15	10:15	9:15	*45 min break*			
Concurrent Sessions				**Track 1: Infrastructure and Community Resilience** Session 2	**Speaker(s)**	**Track 2: Windstorm** Session 2	**Speaker(s)**
1:00	12:00	11:00	10:00	*Assessing Urban Post-Earthquake Community Recovery to Inform Pre-Disaster Planning*	Jack Baker	*Combined Wave-Current-Debris Loading of Near-Coast Structures*	Andrew Kennedy
1:20	12:20	11:20	10:20	*Understanding Urban Resilience to Pluvial Floods Using Reduced-Order Modeling*	Daniel Wright, Vinh Tran	*Analysis, Comparison and Experiment Investigation of Hurricane Wind, Storm-Surge and Wave Load Model*	Landolf Rhode-Barbarigos, Gustavo Aguilar
1:40	12:40	11:40	10:40	*Scalable Assessment of Urban Earthquake Resilience: A Novel Model-informed Deep Learning Paradigm*	Yiming Jia, Mehrdad Sasani, Myra Forester	*Reconstruction of Four-Dimensional Near-Surface Wind Characteristics from Debris and Damage Attributes using Computer Vision*	David Roueche
2:00	1:00	12:00	11:00	*15 min break*			
Concurrent Sessions				**Track 1: Infrastructure and Community Resilience** Session 3	**Speaker(s)**	**Track 2: Windstorm** Session 3	**Speaker(s)**
2:15	1:15	12:15	11:15	*Leveraging Crowdsourced Data to Assess Spatiotemporal Patterns of Resilience in Diverse Gulf Coast Communities Impacted by Natural Hazards*	Michelle Hummel	*Engineering for Building Resilience under Thunderstorm/Downburst Winds*	Dae Kun Kwon, Ahsan Kareem
2:35	1:35	12:35	11:35	*Modeling Intergovernmental Fiscal Impacts of Coastal Hazards*	Clinton Andrews, David Listokin, Junghoon Lee, Garin Bulger, Umer Farooq	*Measurement of Near-Surface Pressure, Wind and Wind-Induced Load Characteristics Using Novel Sensors in Thunderstorm, Tornado and Tornado-Like Environments*	Frank Lombardo
2:55	1:55	12:55	11:55	*An Integrated Housing Design and Logistics Operations Modeling and Analysis Framework for Hurricane Relief*	Yongjia Song, Dustin Albright, Weichiang Pang	*Forcings, Characteristics, and Loadings of Damaging Winds in Derechos and Other High-Impact Thunderstorm Events*	Jeff Trapp, Frank Lombardo
3:15	2:15	1:15	12:15	*15 min break*			
Concurrent Sessions				**Track 1: Infrastructure and Community Resilience** Session 4	**Speaker(s)**	**Track 2: Windstorm** Session 4	**Speaker(s)**
3:30	2:30	1:30	12:30	*Multimodal Disaster Impact Assessment Models for Enhanced Resilience*	Shawn Newsam, Henry Burton	*Assessment of Building Resiliency in Tornadoes Considering Transient Internal Pressure Effects*	Hannah Blum, Delong Zuo
3:50	2:50	1:50	12:50	*Disaster Recovery and Response Innovation through Fuel Cell Deployment*	Alexandra Newman	*Quantifying the Risk & Impact of Wind and Hail Storms in a Warming Climate*	John Allen, Subhadarsini Das
4:10	3:10	2:10	1:10	*Examining the Vulnerability and Recovery of Small Farms to Natural Hazards and the Impact to Rural Community Resilience*	Christine Wittich	*Wireless Sensor Network (WSN) System and LIDAR Experiments for the Characterization of Strong Wind Loads on Non-Structural Components and Near-Surface Wind Profiles*	Chelakara Subramanian, Jean-Paul Pinelli, Steven Lazarus
4:30	3:30	2:30	1:30	**End of Day 1: Closing Remarks Track 1**		**End of Day 1: Closing Remarks Track 2**	

2024 NIST-NSF Disaster Resilience Research Symposium Agenda

ET	CT	MT	PT	Day 2: August 21, 2024			
10:00	9:00	8:00	7:00	Welcome from the Symposium Co-Chairs			
10:05	9:05	8:05	7:05	Opening Remarks from Susan Margulies (NSF)			
10:15	9:15	8:15	7:15	*Keynote #2: Systemic Risk and Resilience: Science and Practice*			Igor Linkov
11:00	10:00	9:00	8:00	*15 min break*			

				Track 1: Infrastructure and Community Resilience Session 1	Speaker(s)	**Track 2: Earthquake** Session 1	Speaker(s)
Concurrent Sessions							
11:15	10:15	9:15	8:15	*Toward Equitable Power Infrastructure Resilience*	Amin Kargarian	*Residual Axial & Lateral Load Carrying Capacity of Pile Supported Marine Terminal Exhibiting Seismically-induced Local Buckling in Inground Plastic*	Theresa Richards
11:35	10:35	9:35	8:35	*Disaster Resilient Acute Care: Protecting Infrastructures from Changing Flood Risk*	Shangjia Dong, Jennifer Horney	*Seismic Assessment and Retrofit Methods for Existing Non-Ductile Reinforced Concrete Wall Structures*	Ioannis Koutromanos
11:55	10:55	9:55	8:55	*Snuff It Out: Extinguishing the Disparity of Access to Shelters for Disadvantaged Communities in Wildfire-Prone Areas*	Alireza Ermagun	*Developing a Selective Column Retrofit Framework for Damaged and Aging Reinforced Concrete Bldgs. to Improve Community Resilience after Earthquakes*	Sergio Breña, Kara Peterman, Omid Monshi Toussi
12:15	11:15	10:15	9:15	*45 min break*			

				Track 1: Fire Session 2	Speaker(s)	**Track 2: Earthquake** Session 2	Speaker(s)
Concurrent Sessions							
1:00	12:00	11:00	10:00	*Wildland Urban Interface & the Built Environment Design, Evacuation & Retreat Under No-Notice Fire Hazards*	Daniel Rivera-Royero; Dwi Purnomo	*Seismic Rehabilitation of Existing Unreinforced Masonry Buildings*	Andreas Stavridis
1:20	12:20	11:20	10:20	*Forecasting WUI Fire Resilience: Quantifying Firebrand Generation and Transport to Identify Communities at Risk*	Fernando Ebensperger	*AI-Powered Sequential Decision Support for Adaptive Post-Earthquake Restoration of Regional Transportation Networks*	Muhammad Ali, Ao Du, Jiannan Cai
1:40	12:40	11:40	10:40	*Assessing long-range firebrand impingement rates in recent WUI wildfire events*	Janice Coen	*Resilience-Based Design of Buildings with Accelerated Post-Earthquake Functional Recovery*	Georgios Tsampras
2:00	1:00	12:00	11:00	*15 min break*			

				Track 1: Fire Session 3	Speaker(s)	**Track 2: Earthquake** Session 3	Speaker(s)
Concurrent Sessions							
2:15	1:15	12:15	11:15	*Development of a quantitative assessment model of WUI fire resilience*	Haejun Park, Michael Kubicki	*Development of Realistic Seismic Input Motions for Improving the Resilience of Infrastructure to Earthquakes*	Boris Jeremic, Chanseok Jeong
2:35	1:35	12:35	11:35	*Computationally Efficient Modeling Framework for Predicting Infrastructure Ignition due to Firebrand Showers*	Brian Lattimer	*Rapid, Scalable, and Joint Assessment of Seismic Multi-Hazards and Impacts: From Satellite Images to Causality-Informed Deep Bayesian Networks*	Susu Xu
2:55	1:55	12:55	11:55	*Quantitative Measurement of Wildfire Behavior in the Field: Leveraging Remote Sensing for Reproducible Observation and Improved Understanding*	Miguel Valero	*Advancing Earthquake Engineering of Cast-in-Place Concrete Diaphragms with Openings*	Travis Thonstad
3:15	2:15	1:15	12:15	*15 min break*		**End of Day 2: Closing Remarks Track 2**	

				Track 1: Hazards and Health Session 4	Speaker(s)		
Concurrent Sessions							
3:30	2:30	1:30	12:30	*Disinfection Resiliency and Microbial Risk in Drinking Water Distribution Systems During Extreme Heat Disasters*	Kirin Furst		
3:50	2:50	1:50	12:50	*Innovative Measurement and Modeling of Dynamical Social and Health Effects of Windstorms*	Wei Song, Guofeng Cao, Zhen Cong		
4:10	3:10	2:10	1:10	*Integrating Remote Sensing and Deep Learning for Predictive Surveillance of Mine Tailings Impoundments*	Thomas Oommen Sidike Paheding		
4:30	3:30	2:30	1:30	**End of Day 2: Closing Remarks Track 1**			