MMM SEMINAR SERIES

Dynamic Risks and Risk Perceptions: Using Longitudinal Panel Surveys to Capture Perishable Social Science Data During Hurricanes

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Risks from hurricanes are highly dynamic. For instance, as a hurricane intensifies or its track shifts, it poses different hazards and can put different people in harm's way. As hurricane risks evolve, so too does risk communication about them, including weather forecasts and warnings and recommendations about preparedness and response actions. There is a robust body of literature that examines what risk messages people receive and their risk perceptions when a hurricane threatens. However, much of the empirical research is cross-sectional, that is, measured at one point in time. Thus, this research is limited in what it can reveal about whether and how people dynamically perceive and manage hurricane risks, much less how these processes are driven by the dynamic nature of the hurricane itself.

This presentation will discuss a novel methodology developed and implemented over the last few years to rapidly deploy and repeatedly survey the same coastal residents, termed a longitudinal panel survey, as a given hurricane was approaching landfall in the mainland U.S. The repeated surveys, termed waves, allowed us to capture perishable social science observations to measure what forecast and other risk information people were obtaining and how they perceived risks from the hurricane, all as the hurricane risks were evolving. We fielded three survey waves each for (1) Hurricanes Laura and Marco, which simultaneously threatened the Gulf Coast in 2020, (2) Hurricane Henri, which threatened New York and New England in 2021, and (3) Hurricane Ian, which threatened much of the Gulf Coast and southeastern Atlantic in 2022. Between approximately 800-1000 people responded to the longitudinal panel surveys for these different hurricane events. This presentation will examine the dynamics of the risk information people obtained and their risk perceptions, and it will couple the analysis of these evolving social science observational data with the evolving meteorological forecasts that were in effect at the time.

Thursday, 26 January 2023, 2:00pm
Refreshments 1:45pm
Please also join colleagues for refreshments and informal discussion after the seminar until 3:30pm
NCAR-Foothills Laboratory, 3450 Mitchell Lane
FL2-1022, Large Auditorium
Seminar will also be live webcast
https://operations.ucar.edu/live-mmm
Participants may ask questions during the seminar via Slido.