

# MMM SEMINAR SERIES



## *AI, tornadoes, & social science: Examining trustworthiness and communication at the weather-society interface*

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*PARC I/UCAR*

In this seminar I focus on the ways theoretical social and convergent science can advance our understanding of how forecast information is used and communicated across the weather enterprise. I do this by highlighting results from two studies that examine different dimensions of the landscape surrounding forecast information.

The first study analyzes the increasingly popular concept of “trustworthy AI” through a review of three different areas of trust research (interpersonal, risk perceptions, and automation). I challenge current understandings of trustworthy AI by reconceptualizing the trustworthiness of AI as (1) perceptual – the result of a subjective evaluation and (2) context-dependent. These two points are essential considerations for future conceptual work and for developers, researchers, and policymakers to keep in mind when developing, implementing, regulating, and communicating about AI they hope will be perceived as trustworthy.

The second study focuses on better understanding the communication and decision-making processes surrounding the December 10-11, 2021 tornado events that heavily affected many communities overseen by the National Weather Service (NWS) Paducah, KY Weather Forecasting Office (WFO). In March and April of 2022, I conducted 40 semi-structured interviews related to the event with NWS forecasters, emergency managers, broadcast meteorologists, and members of the public. I discuss what forecast information was communicated by whom and when; and what information was received and how it was interpreted, all as the tornadic threats evolved. I also show how different actors within the communication landscape made decisions, messaged the risks, and received information relating to the tornadic events.

**Thursday, 08 June 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.