

MMM SEMINAR SERIES



Tweeting through the storm: Using social media data to understand the dissemination and retransmission of tropical cyclone risk information

Robert Prestley
NCAR/MMM

In the days to weeks before a tropical cyclone makes landfall, authoritative sources of meteorological information play a key role in communicating information about the tropical cyclone and its associated hazards as the storm evolves. These sources often create visualizations to simplify dense forecast and warning information into more usable and understandable formats that are then shared on social media networks. In this seminar, I explore how different types of forecast and warning information, including visual risk information, are disseminated by authoritative sources during tropical cyclone events, how the flow of forecast and warning information shifts as tropical cyclones evolve, and how members of the public engage with and share these different kinds of information. To answer these questions, I use data collected from Twitter, which offers a “natural laboratory” for exploring how different authoritative sources disseminate information and how this information is retransmitted via sharing functions like retweets. Many Twitter analyses rely on “big data” analysis approaches; here, I describe how careful choices in collecting, filtering, and curating data can yield smaller, more focused datasets which allow for richer, more contextualized analysis.

First, I discuss our analysis of Hurricane Harvey, which provides an exploratory look at who is disseminating tropical cyclone risk information and how this information varies over the course of Harvey’s threat. I then present our Hurricane Irma analysis, which builds on the results and lessons learned from the Harvey analysis to provide more rigorous quantitative analysis of what drives retransmission of different kinds of forecast and warning information. Results from these analyses help recontextualize the forecast and warning phase of tropical cyclones, and disasters writ large, by providing better understanding of how authoritative sources’ communication evolves in the lead-up to an event. Additionally, these results provide guidance on how authoritative sources can improve their communication on social media to better reach at-risk members of the public.

Thursday, 24 August 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.