



PhD Opportunity in the School of Meteorology at the University of Oklahoma

Developing a Framework for Seamless Prediction of Sub-Seasonal to Seasonal Extreme Precipitation Events in the United States

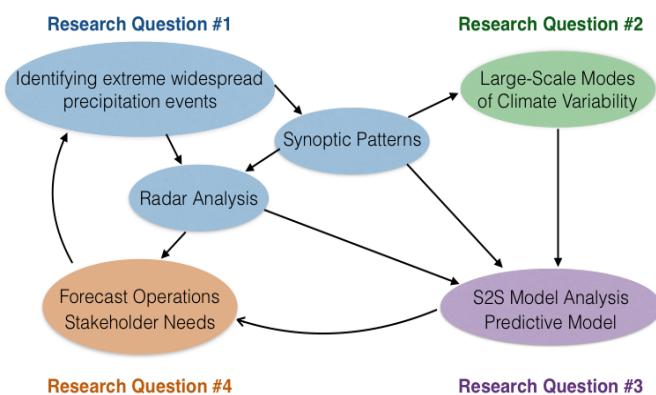
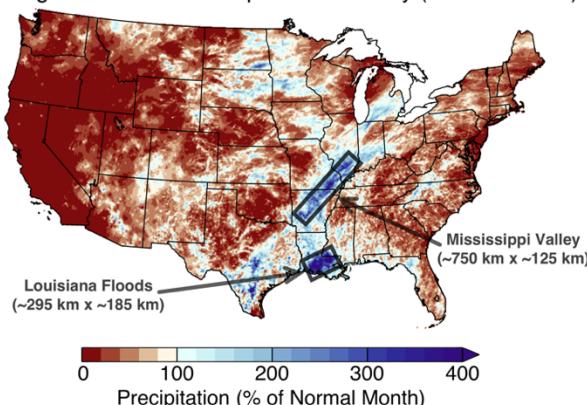


Position Description: Our research group seeks a motivated PhD student, interested in a leadership role in determining the space and time variations of extreme precipitation events. The project aims to enhance fundamental understanding of the large-scale dynamics and forcing of sub-seasonal to seasonal (S2S; 14 days to 3 months) extreme precipitation events in the U.S. and improve our capability to model and predict such events (i.e., precipitation that far exceeds climate norms for a given period). The student will work with observational and modeling subgroups in our team to identify extreme events in nonstationary precipitation time series and gain an understanding of novel machine-learning techniques in this endeavor using data from high-resolution radar composites, and dynamical coupled climate models. The ultimate deliverable from this project for the Ph.D. student will be a flexible statistical framework with which to work with S2S extreme precipitation events databases. In addition to the statistical and meteorological elements of the work, the student will interdisciplinary experience by engaging with interested stakeholders and applying the results of this project to their specific needs in co-production of knowledge. The skills gained will be highly marketable for both academic and private-industry markets.

The ideal candidate will have: (1) strong computer programming skills in an Unix environment (specific language flexible); (2) an understanding of statistics, large-scale atmospheric and/or climate dynamics, and synoptic-scale meteorology; (3) an intellectual curiosity to learn and innovate in machine learning and statistical techniques related to S2S prediction problems; and (4) strong scientific oral and writing skills.

Start Date: January 2018. Anticipated funds sufficient for 5 years of continuous funding.

(b) August 2016 2-wk Precipitation Anomaly (08/03 to 08/16)



Interested students should contact both

Drs. Michael Richman (mrichman@ou.edu) and Jason Furtado (jfurtado@ou.edu). Please include a copy of your CV, academic transcript, and short statement of interest.