

**Variability and predictability of extreme precipitation in the United States**Charles Jones<sup>†</sup>; Leila Carvalho<sup>†</sup> University of California, USALeading author: [cjones@eri.ucsb.edu](mailto:cjones@eri.ucsb.edu)

Extreme precipitation events are among the most devastating weather phenomena since they are frequently accompanied by hazardous weather. Oftentimes, these events are accompanied by flash floods and landslides, which increase the potential for loss of life and property. This work investigates the spatiotemporal variability and subseasonal predictability of extreme precipitation in the contiguous United States (CONUS) during boreal winter. In particular, the study investigates the influence of the Madden-Julian Oscillation (MJO) on the occurrence and forecast skill of extreme precipitation. Extreme events were studied with observed daily gridded precipitation (1 November-1 March, 1948-2010). Contiguous regions of extreme precipitation (CREP) were defined as regions of spatially connected gridpoints in which precipitation and area exceeded the 90th percentiles of the respective frequency distributions. Forecasts of daily extreme precipitation were investigated with reforecasts from the NCEP Climate Forecast System (CFS) model. The presentation will show that the MJO has a significant role in the occurrence and forecast skill of extreme precipitation in the United States.