

## **Stormscale Hydrology Group**

CIMMS researchers at the Stormscale Hydrology group at the National Severe Storms Laboratory (NSSL) work on modeling advancements and techniques to improve the prediction and warning of flash flooding. The work conducted by this group is applied to the Flooded Location and Simulated Hydrographs (FLASH) system, which provides hydrologic model output and rainfall comparisons at a high temporal resolution specifically designed for flash flood detection.

CIMMS researchers work on various hydrologic techniques within FLASH to improve the prediction of anomalous rainfall and water runoff that could pose a threat to life and property. This group also hosts the Hydrometeorology Testbed (HMT)-Hydro Experiment to evaluate these new techniques and models with National Weather Service forecasters. Years of collaboration with the NWS has allowed CIMMS researchers to develop products now utilized by the NWS to better issue flash flood warnings. Their latest research is focusing on providing probabilistic hydrologic data to better convey the potential flash flood threat and its severity. CIMMS researchers are also investigating other related hazards to heavy rainfall, like debris flows that are a result of precipitation falling on burn scars from recent wildfires.

More information on this group and the work that they do for the FLASH project (including real-time data) can be found here:

<http://flash.ou.edu/new/>

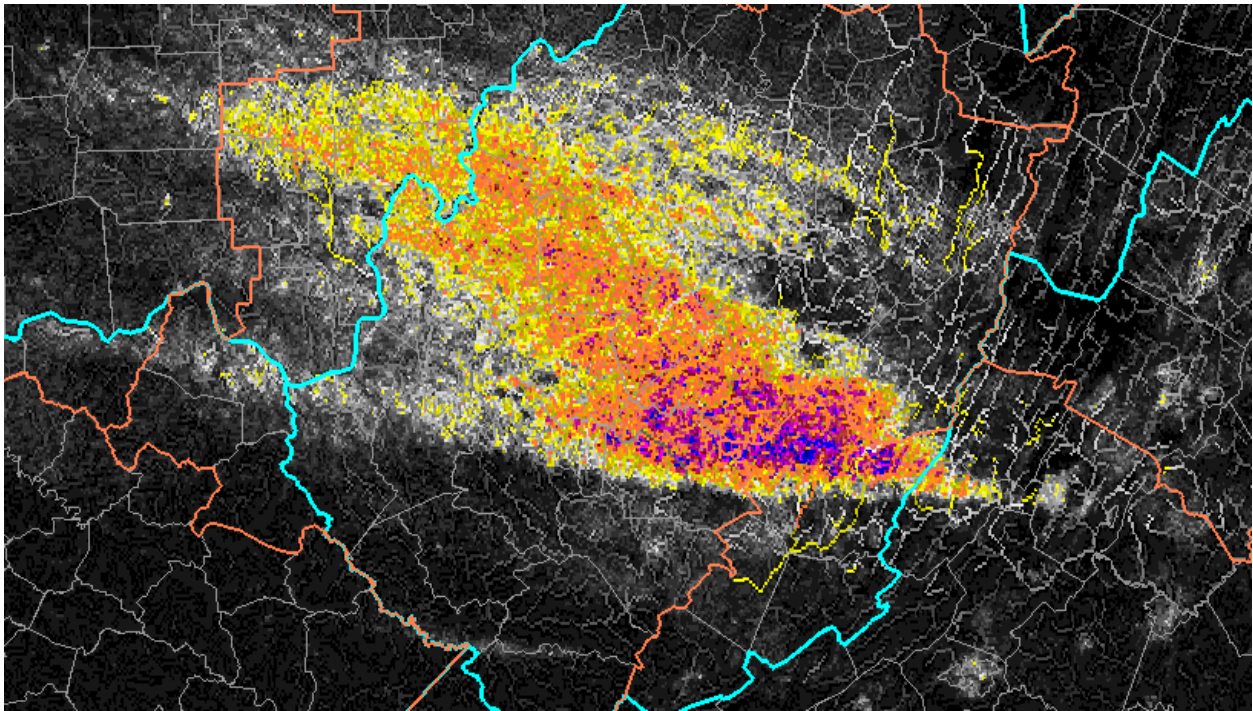
<https://blog.nssl.noaa.gov/flash/>

CIMMS Contact: Dr. Stephen Cocks ([Stephen.b.Cocks-1@ou.edu](mailto:Stephen.b.Cocks-1@ou.edu))

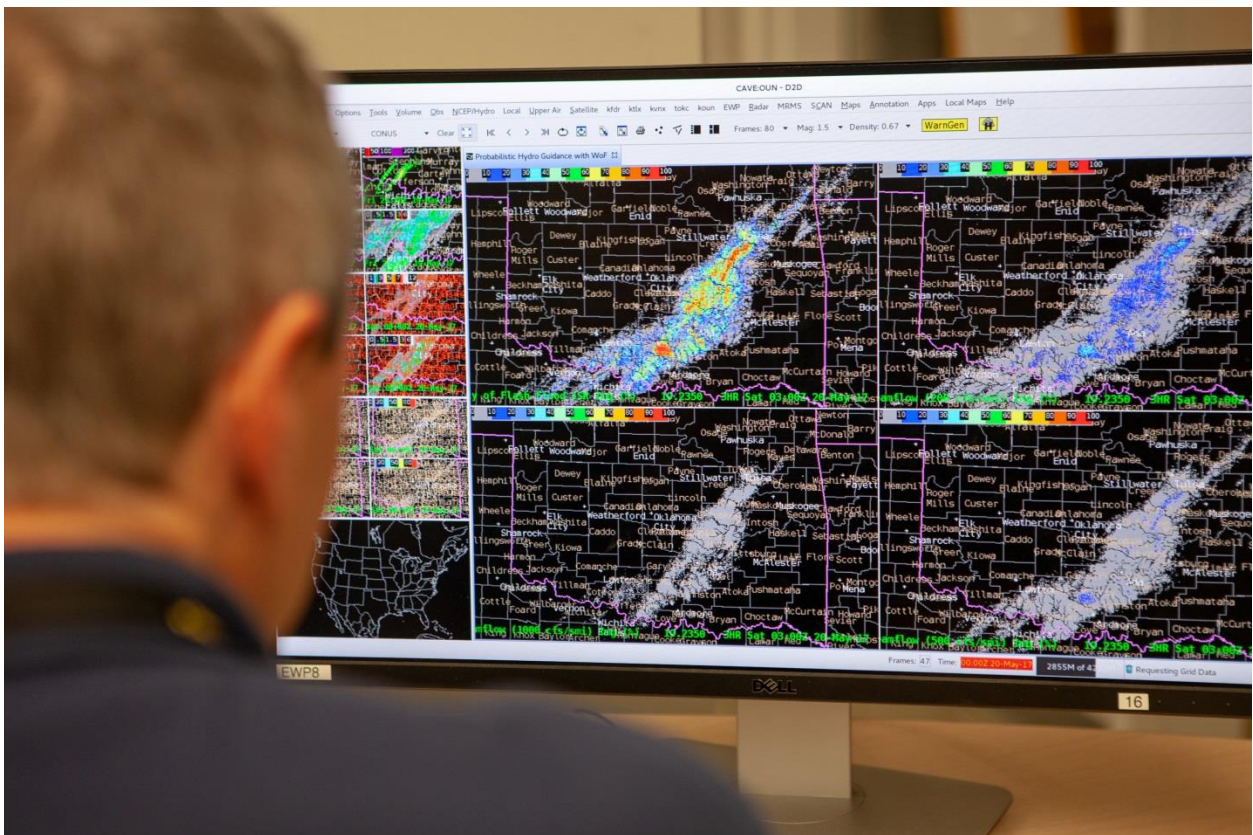
Team Members

Steven Martinaitis

Dr. Humberto Vergara-Arrieta



The maximum unit streamflow product from the FLASH system showing the areas of potential flash flooding and its severity during the deadly 23 June 2016 flash flood event in West Virginia.



A forecaster interrogates experimental probabilistic hydrologic model output for a flash flood event in Oklahoma from 19 May 2017 during the 2018 HMT-Hydro Experiment.