

## Summary of 32<sup>nd</sup> Conference on Hydrology January 2018

The 32<sup>nd</sup> Conference on Hydrology as part of the 2018 AMS annual meeting was successful on many fronts. Most notably, the Conference was well attended and saw an increase in the number of submitted abstracts over previous years. The Conference also had substantial student involvement that added a vibrant and important aspect. Lastly, the scientific content of the conference consisted of a large diversity of topics that helped advance the science in the weather water and climate communities. A brief summary of each of these aspects is provided below.

**By the Numbers:** There were 389 abstracts submitted to the 32<sup>nd</sup> Conference on Hydrology, which was an increase of about 120 abstracts from the previous year. These abstracts made up 18 sessions across the four-day conference. The ratio of oral presentations to posters for all sessions combined was approximately 42%. The oral sessions were well attended with an average of 55 people. The increase in abstract submissions stimulated vibrant and well-attended poster sessions. There were also 63 session chairs and co-chairs who helped with the organization and implementation of the 18 sessions. The Hydrology Conference would not have been possible without the service of the session chairs and co-chairs.

**Student Involvement:** Students were involved in many levels of the Hydrology Conference. Of the 63 session chairs and co-chairs, six of these were students. In addition, 74 of the 389 abstracts were from students. These student abstracts took part in the student competition sponsored by the Hydrology Committee. This was a large undertaking that consisted of evaluating each student presentation by three different judges, for a total of 222 student evaluations. The top two student oral and poster presentations were awarded a cash prize of \$150 for first place and \$75 for second place. Ruochen Sun from Nanjing University was awarded 1<sup>st</sup> place for their poster on "Effect of Heteroscedasticity Treatment in Residual Error Models on Model Calibration and Prediction Uncertainty Estimation." Eli Dennis from Pennsylvania State University was awarded 2<sup>nd</sup> place for his poster on "Initializing Numerical Weather Prediction Models with Model-Derived and Satellite-Based Soil Moisture Data." Jordan Christian from the University of Wyoming was awarded 1<sup>st</sup> place for his oral presentation on "The Evaporative Stress Index as an Indicator for Flash Drought Across the United States Using Reanalysis Datasets." Melissa Wrzesien from Ohio State University was awarded 2<sup>nd</sup> place for her oral presentation on "A New Estimate of North American Mountain Snow Accumulation from Regional Climate Model Simulations." We thank the many evaluators for their efforts in making this competition possible.

**The Science:** The 32<sup>nd</sup> Conference on Hydrology had a large diversity of sessions/topics this year, as well as a higher number of invited speakers. Sessions included the following: Land Surface-Atmosphere Interactions; Drought Analysis and Prediction; Precipitation processes and observations; Hydrometeorological Extremes; Flood Prediction, Analysis, High Performance Computing, Decision Support, Management, and Tropical Cyclones; Probabilistic Hydrometeorological Forecasting and Uncertainty Analysis; Variability of Regional Hydroclimate; Severe Precipitation Detection, Estimation, Forecast and Hydrometeorological Applications; Advances in Evaporation and Evaporative Demand; Advances in the Application of Land Surface Observations and Land Data Assimilation Techniques; Hydrometeorological Extremes for Hydrologic Design; Multi-processes Analysis, Modeling, and Product Application

in Arid and Semi-Arid Regions; Advancing the Use of Earth Observations to Benefit Global Food Security and Agriculture; Snow Hydrology Applications Through Remote Sensing, Modeling, and Data Assimilation; Coupled Processes of Atmosphere, Land, and Hydrology Prediction Models; Monsoons of the Americas; Local and Regional Response in the Water Cycle Due to Urbanization; and Decision Making by Water Utilities.

Each of these sessions advanced the science through specific presentations and discussions. One highlight was this year's Horton Lecture, which was given by Gerald R. North, from Texas A&M University. His talk, titled "Rain Rates from Space: Past & Future," provided a nostalgic view of the evolution of satellite-based rainfall; it was enlightening and entertaining for all who attended.

There were also several sessions that directly addressed the 2018 AMS theme of "Transforming Communication in the Weather, Water, and Climate Enterprise Focusing on Challenges Facing Our Sciences." One example was the panel discussion titled, "Decision-Making by Water Utilities: Using Climate/Weather Information in Short- and Long-Term Planning." This discussion was moderated by Nancy Beller-Simms, a Program Manager from the NOAA Climate Program Office. It provided insightful and meaningful discussion about making predictions more useful for decision makers.