

Welcome!

Please join us for the next ATOC Colloquium on **Friday, Nov. 13** from **11:00 AM–12:00 PM**, which will be held in **SEEC S228** and simulcast over Zoom. This week's colloquium features **Dr. Clark Evans (NOAA GSL)**. Please join us for conversation beginning at 10:45 AM.

Model Development, Forecasting, and Evaluation Activities Using the Model for Prediction Across Scales (MPAS) for Future NOAA Operational Weather Prediction Systems



NOAA's Global Systems Laboratory (GSL) engages in scientifically grounded, hypothesis-driven development activities to improve operational and research Earth-system prediction capabilities for all weather-related phenomena and hazards, including severe convective storms, intense rainfall, winter storms, tropical cyclones, and wildfire smoke and dust. This development has manifested through NOAA's operational modeling systems such as the Rapid Refresh (RAP), High-Resolution Rapid Refresh (HRRR), and Rapid Refresh Forecast System (RRFSv1).

Over the last two years, GSL has been developing with the Model for Prediction Across Scales (MPAS) toward future NOAA operational weather prediction systems such as RRFSv2 and in support of NOAA's Numerical Weather Prediction Moonshot for skillful and reliable global, kilometer-scale, fully coupled ensemble forecasts. My presentation will provide a high-level overview of these development activities, including an introduction to our model development philosophy and practices; descriptions of the modeling system's physics parameterizations and data-assimilation routines; and results from extensive testing and evaluation activities. I will also briefly discuss an example of how these developments permit the application of process-level understanding to advance predictive capabilities.

Zoom: https://cuboulder.zoom.us/j/4713174822 **Passcode:** ATOC

About the ATOC Colloquium

The Department of Atmospheric and Oceanic Sciences (ATOC) Colloquium is typically held **every other Friday** from **11:00 AM–Noon**. Colloquia alternate between the following formats: (A) Full-length talk by a faculty member or invited speaker, (B) Three conference-length talks by graduate students. If you would like to nominate a speaker (including self), please email the ATOC Colloquium Committee Chair, Prof. Jianghanyang (Ben) Li (Jianghanyang.li@colorado.edu). Please visit www.colorado.edu/atoc/colloquium for further details.