



Experimental Storm-Scale Ensemble-Based Numerical Weather Prediction Systems for Hazardous Weather Guidance

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NOAA's Warn-on-Forecast project is developing high-resolution, probabilistic numerical weather prediction systems to help increase warning lead times for tornadoes and other convective-storm hazards. Warn-on-Forecast is one of many applications that could be enabled by a national storm-scale ensemble data assimilation and NWP system, and discussions of such a system have begun at recent workshops.

To gain experience toward this goal, the Earth System Research Laboratory and National Severe Storms Laboratory will run experimental, real-time, convection-allowing ensemble systems during spring 2016. A prototype High-Resolution Rapid Refresh Ensemble (HRRRE) will assimilate conventional observations hourly and produce ensemble storm-scale forecasts over a sub-CONUS region. Nested within the HRRRE, a prototype NSSL Experimental Warn-on-Forecast System for Ensembles (NEWSE) will assimilate radar observations at 15-min intervals and produce frequent 90-min ensemble forecasts. A solid foundation for this effort has been provided by NCAR through the development of the Weather Research and Forecasting model, the Data Assimilation Research Testbed system, and the associated research on mesoscale data assimilation and numerical weather prediction.

At the seminar, I will describe these prototype systems and discuss results with test cases so far. I will also discuss challenges that lie ahead, such as resolution requirements for predicting tornadoes and other convective-storm phenomena.

*This seminar will be webcast live at:
<http://www.fn.ucar.edu/it/mms/fl-live.htm>*

*Recorded seminar link can be viewed here:
<https://www.mmm.ucar.edu/events/seminars>*

Thursday, 14 April 2016, 3:30 PM
Refreshments 3:15 PM
NCAR-Foothills Laboratory
3450 Mitchell Lane
Bldg 2 Main Auditorium, Room 1022