University of Oklahoma Post-Doctoral Research Associate

The Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) seeks to fill a Post-Doctoral Research Associate position for projects funded by the National Oceanic and Atmospheric Administration (NOAA) Office of Oceanic and Atmospheric Research (OAR) National Severe Storms Laboratory (NSSL) and by the National Aeronautics and Space Administration (NASA). The Post-Doc will contribute to NSSL's Warn-on-Forecast (WoF) program.

Background:
The vision for the WoF program is to develop a probabilistic storm-scale, ensemble-based forecast system with the goal of increase warning lead times for threats related to severe and hazardous high impact convective weather, e.g., tornadoes, large hail, damaging winds, and flash floods. While significant progress had been made over the past several years in assimilating radar observations into the prototype WoF system, assimilation of high resolution satellite observations has begun only recently. The planned launch of GOES-R in 2016 opens up a potential avenue to improve storm-scale forecasts. The incumbent in this position will focus on improving the capabilities of assimilating GOES-R ABI observations into the WoF data assimilation system.

Responsibilities:
The incumbent will develop and refine techniques for assimilating GOES-R ABI radiances, atmospheric motion vectors, and cloud property retrievals into an ensemble data assimilation system based on the operational Gridpoint Statistical Interpolation (GSI) package linked to an ensemble Kalman filter (EnKF). Radiances will be assimilated using the Community Radiative Transfer Model (CRTM) linked to the GSI package. One key aspect of this work will be to create and optimize high resolution satellite data assimilation when combined with other high-resolution observations such as radar reflectivity and radial velocity. The incumbent will also publish the results in peer-reviewed literature and present at conferences.

Required Qualifications:
1. A Ph.D. Degree (or be in the final stages of dissertation completion before applying) in meteorology, atmospheric science or related area.
2. Research experience with storm-scale numerical weather prediction models and ensemble data assimilation techniques. Experience in satellite data assimilation is preferred.
3. Experience with satellite retrievals, radiances, and/or radiative transfer modeling
4. Experience with Linux (or Unix) operating systems, programming (e.g., Fortran, C, C++) and scripting (e.g. Python, NCL) skills.
5. Excellent oral and written communication skills (including papers published in or submitted to refereed journals) and an ability to work both independently and cooperatively with others.

The beginning salary range will be commiserate on qualifications with University of Oklahoma benefits. Information on benefits may be found at http://hr.ou.edu/Employees/New-Employees-at-OU/OU-Benefits-Overview. Start date for the position will be as soon as the candidate can begin work. The position will remain open until filled.

This position is a full-time, one-year appointment and is funded by grants from NOAA and NASA.

The appointee will serve a customary probationary period during the first year, after which the appointment could be extended for up to two additional years subject to satisfactory performance and the continued funding availability.

To apply for the position, please forward your resume, cover letter and list of three references to:

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Tracy Reinke, Executive Director, Finance and Operations
University of Oklahoma CIMMS
120 David L. Boren Blvd., Suite 2100
Norman, OK 73072-7304
treinke@ou.edu
ATTN: WoF Satellite Data Assimilation 05-16

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