

Univ of Oklahoma-CAPS Scientist Opening
Research Associate or Post-doc Appointment



Overview:

The Center for Analysis and Prediction of Storms (CAPS) at the University of Oklahoma is seeking a meteorologist or data scientist to participate in research of cutting-edge numerical weather prediction (NWP), ensemble weather prediction and associated calibration/post-processing to improve forecasts of high impact weather. The individual selected for this position will contribute to NOAA-funded projects relating to flash flood prediction, winter weather predictions, and development of the next-generation Rapid Refresh Forecast System (RRFS) ensemble. This research includes the use of machine learning algorithms to calibrate and post-process convection-allowing model output, so an interest in data science/AI will be helpful.

Job Responsibilities:

- Implement new and updated model capabilities for research and real-time forecasting utilizing the convection allowing model ensembles.
- Run and monitor real-time ensemble NWP forecasts using NOAA's FV3-LAM (specifically, the UFS Short-Range Weather App) on high performance computing systems, to support CAPS research projects. Non-standard work hours may be required for 4-6 weeks in the summer and 2-3 weeks in the winter (can be done remotely).
- Contribute to verification of CAPS ensemble forecasts and forecast products.
- Publish findings in peer-reviewed academic journals and present research results at professional meetings and conferences.

Required Qualifications:

- Master's degree (for a research associate appointment) or a recent Ph.D. (to be appointed as a post-doc) in meteorology, atmospheric science, computer science/data science or a closely-related field.
- At least one year of experience working with numerical weather prediction models (e.g., WRF, FV3, ARPS) in a high-performance Linux environment.
- Two years of experience in scientific programming and computing on Linux systems using high-level programming languages (such as Fortran, R and/or Python).
- Ability to work independently and troubleshoot issues in running community-developed software packages.
- Ability to communicate effectively in meetings, research presentations, software documentation, and formal publications.

Desired Skills:

- Familiarity with workflow management on high-performance computing systems using schedulers such as SLURM.

- Experience with developing and/or modifying workflow automation using, e.g., Linux/Unix shell scripts, Python, and/or Rocoto.
- Familiarity with methods and software for NWP forecast visualization, evaluation, and verification, such as Python, Model Evaluation Tools (MET), etc.
- Familiarity with accessing datasets via tools such as AWS CLI and/or UNIDATA LDM.

Salary and Benefits

Beginning salary will be commensurate with experience and the position appointed. There are opportunities for promotion and raises, especially for someone with new ideas willing to contribute to the preparation of new grant proposals. Full-time employment with OU research staff benefits, including generous paid leave, health insurance, and retirement savings plans. Flexible scheduling and some hybrid work are permitted. Rewarding work environment in the National Weather Center, collaborating with academic and operational partners on the latest soon-to-be-operational tools and methods. The University and City of Norman offer numerous recreational and cultural activities in a vibrant college town (<https://bit.ly/livenorman>), with all the amenities of a larger city, just 20 miles away in Oklahoma City. Norman also has a low cost of living compared to most cities (see e.g., <https://www.bestplaces.net/cost-of-living/>).

How to Apply:

Send a statement of interest highlighting how you meet the position qualifications, your resume/CV, and a list of three professional references to: Keith Brewster, kbrewster@ou.edu. Questions about the position may also be directed via email to Dr. Brewster.

This position will remain open until filled. A formal review of applications will start on October 23rd, 2023 with anticipated start date in December, 2023. Fall 2023 graduates are welcome to apply.

The University of Oklahoma is an Equal Opportunity employer, and applications are encouraged from underrepresented groups.