Research Associate III  
(Statistical Post-processing Meteorologist/Developer)  
18-130

The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University seeks to fill two full-time professional scientific positions for its collaborative research and development as a Cooperative Institute with the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) Meteorological Development Laboratory (MDL) Decision Support Branch in Silver Spring, MD. These positions are located in a federal facility in Silver Spring, MD and require the ability to pass a National Agency Check with Inquiries (NACI, federal background check) for building access.

Background:
CIRA and the NWS/MDL have engaged in a number of successful collaborations in a wide variety of scientific and software endeavors. The LAMP system produces objective guidance based on the statistical interpretation of numerical weather prediction models. Providing gridded forecast guidance for input into the National Weather Service’s National Blend of Models (NBM) is a primary objective, but guidance will also be of use to the NWS Aviation Weather Center, the NWS Weather Forecast Offices to prepare Digital Aviation Services, and the Federal Aviation Administration. LAMP developers write software for MDL’s statistical interpretation system and develop objective forecast techniques that improve the NWS suite of weather guidance products. The LAMP team supports development and implementation of the Gridded LAMP system, as well as the traditional station-based LAMP guidance which will be used as an input into Gridded LAMP. Gridded LAMP guidance will be an input into the National Blend of Models.

The individuals in these positions will assist in the update and development of improvements to the LAMP system for the benefit of the NWS and the aviation community. Focus will be given on improving both station-based LAMP guidance as well as gridded LAMP guidance for the elements of ceiling height and visibility, lightning and convection, and other aviation-related weather elements. These positions will report to the Senior Research Associate who oversees collaboration efforts with MDL.

Responsibilities:
- Software Development 70%
  - Assist in adapting the MDL software system to include, ingest, and store observations and model data for statistical analysis.
  - Produce and maintain an archive of the data for use in development and testing of the system.
  - Modify the LAMP software as necessary for developing statistical equations and thresholds.
Evaluate the results of the developed equations and thresholds to determine improvement.

- Collaborative Research 20%
  - Assist with collaboration between users, other groups, and other agencies.
  - Collaborate with end users including the NWS Aviation Weather Center and the NWS forecasters in Alaska.
  - Assist with the transition of research to operations of upgraded LAMP and Gridded LAMP systems, and the preparation of the systems for handoff to NCEP’s Central Operations for implementation into the NWS job stream.
  - Assist with making the new guidance available for use in the National Blend of Models.

- Documentation and Reporting: 10%
  - Prepare software documentation in collaboration with team members.
  - Prepare status reports as required by the project sponsor and CIRA.
  - Prepare and deliver technical talks and presentations as requested.

**Required Qualifications:**

- This position is located in a federal facility in Silver Spring, MD and requires the ability to pass a National Agency Check with Inquiries (NACI, federal background check) for building access.
- Bachelor’s degree in Atmospheric Sciences, Meteorology, or related physical science with 5 years of relevant experience or Master’s degree in Atmospheric Sciences, Meteorology, or related physical science with 2 years of relevant experience;
- Experience with GIS packages (e.g., ArcGIS).
- Experience with image display software for displaying meteorological fields.
- Basic knowledge of statistics, including familiarity with statistical methods used in atmospheric sciences (i.e. linear regression, typical verification scores).
- Experience with Microsoft Office (Word, PowerPoint, Excel).
- Experience working on supercomputers.
- Knowledge of National Weather Service operations, products, and services.
- Demonstrated experience in the design and development of scientific computer programs using FORTRAN;
- Knowledge, skill, and/or experience in data modeling and the management of large scientific datasets.
- Demonstrated oral and written communication skills.

**Desired Qualifications:**

- Experience post-processing NWP output;
- Experience with Linux/Unix systems and shell scripting;
- Experience with software version control such as subversion and/or git;
Experience working with Gerrit code-review and issue tracking software such as Redmine;
Knowledge, skill, and/or experience in standard meteorological data formats;
Knowledge, skill, and/or experience in community source software development;
Knowledge, skill, and/or experience in Fortran, C, C++, and other programming languages that are commonly used in parallel computing and operational supercomputing systems;
Ability to handle multiple tasks and meet project deadlines, communicate effectively both verbally and in writing, and a willingness to learn new skills for professional growth within the position;
Experience coordinating projects or research between multiple groups or agencies;
Knowledge of operational meteorology, NWS operations, and NWS users and partners.

Salary: Commensurate with qualifications and experience

Background Check:
Colorado State University is committed to providing a safe and productive learning and living community. To achieve that goal, we conduct background investigations for all final candidates being considered for employment. Background checks may include, but are not limited to, criminal history, national sex offender search, and motor vehicle history. In addition, this position is located in a federal facility and requires the ability to pass a National Agency Check with Inquiries (NACI, federal background check) for building access.

Commitment to Diversity and Inclusion:
Reflecting departmental and institutional values, candidates are expected to have the ability to advance the Department's commitment to diversity and inclusion.

Application Deadline: Applications will be accepted until all positions are filled; however, to ensure full consideration applications should be submitted by 11:59PM on September 16, 2018. Apply electronically by clicking “Apply to this Job” at the following website: http://jobs.colostate.edu/postings/59948. References will not be contacted without prior notification of candidates. Please be sure to address the required and preferred qualifications in the application materials.