The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University seeks to fill a full-time professional scientific position 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. 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. (Office will be in Silver Spring, MD; however, the option exists to work remotely from your home/office with periodic coordination meetings in Silver Spring.)

Background:
CIRA and the NWS/MDL have engaged in a number of successful collaborations in a wide variety of scientific and software endeavors. The Weather Information Statistical Post-processing System (WISPS) has provided MDL and CIRA an opportunity to work together on MDL’s primary competency - statistical postprocessing of the output from Numerical Weather Prediction (NWP) models.

It is difficult to overestimate the importance of statistical postprocessing and MDL’s signature technique, Model Output Statistics (MOS), to modern meteorology. The most recent version of this software, MOS-2000, is an impressive software system by many benchmarks. Its limitations, however, have become problematic, and the NWS needs to invest in a replacement system. The WISPS Project is developing the framework that will take the inaugural version of WISPS to Technical Readiness Level 9, such as operational implementation on NOAA’s Weather and Climate Operational Supercomputing System, (WCOSS) for some portion of the NWS's statistical postprocessing mission. The project will emphasize suitability for supercomputer operations, multiple statistical postprocessing methods, data formats that are self-describing and embrace widely-accepted standards, and software systems that are flexible, extendible, and shareable.

The individual in this position will provide expertise in a wide range of technical areas, including but not limited to: software design and development; parallel computing; data modeling; processing output fields from NWP; mapping, map projections, and other geospatial topics. This position will report to the Senior Research Associate who oversees collaboration efforts with MDL.

Responsibilities:
● Software Development 70%
  • Provide leadership, direction, and expertise to prototype data storage technologies and data modeling strategies that will form the foundation of WISPS;
  • Provide leadership, direction, and technical expertise in aligning WISPS data formats with widely-accepted and emerging standards.
  • Develop the software to support the operational needs of the NWS;
  • Mature and migrate the initial WISPS capability into NWS operations.

● Collaborative Research 20%
  • Provide leadership, direction, and technical expertise in identifying and documenting WISPS requirements;
  • Investigate useful pre-existing technologies (e.g., NetCDF, HDF5, GitHub, NWS VLab, software libraries) that will support the development of WISPS;

● 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;
- Demonstrated experience working with Model Output Statistics technique, or other statistical techniques used in objective interpretation of numerical weather prediction (NWP) output;
- Knowledge of and/or experience working with and leading a scientific software development team;
- Demonstrated experience in the design and development of scientific computer programs;
- Knowledge, skill, and/or experience in data modeling and the management of large scientific datasets.

Desired Qualifications:

- Experience post-processing NWP output;
- Experience coordinating projects or research between multiple groups or agencies;
- Experience with Linux/Unix systems;
- 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 August 19, 2018 Apply electronically by clicking “Apply to this Job” at the following website: https://jobs.colostate.edu/postings/58954. References will not be contacted without prior notification of candidates. Please be sure to address the required and preferred qualifications in the application materials.