The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University seeks to fill a mid-level software engineering position for its collaborative research as a Joint Institute with the National Oceanic and Atmospheric Administration (NOAA) Earth System Research Laboratory (ESRL) in Boulder, Colorado (office will be in Boulder). 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.

Background: The Global Systems Division (GSD) of NOAA’s Earth System Research Laboratory (ESRL) is designing, developing and testing new weather models to improve weather prediction. The goal is to improve prediction of severe weather including hurricanes, tornadoes, thunderstorms, flooding, and other weather that can have enormous impact on transportation, commerce, energy, and other sectors of the U.S. economy. Increasingly accurate forecasts depend on large high performance supercomputers to run advanced weather prediction models.

The High Performance Computing Section (HPCS) in GSD supports the development of these research models and conducts research into traditional CPU and emerging chip technologies including Graphics Processing Units, Tensor Processing Units (TPUs), and ARM. The position will be to support development of the FV3GFS, selected by the National Weather Service to be its next global weather prediction model. The NWS is currently preparing the model to be run operationally in 2019. GSD is also working with NWS and other modeling groups to help improve the prediction model by testing and evaluating new physics, chemistry and ocean components.

Responsibilities: The position will be an opportunity to participate scientific research, and work with staff tasked with advancing state-of-the art in computing, meteorology and climate research at NOAA. The individual in this position will be a junior to mid-level software developer or scientist who will support the development of advanced weather prediction models. The incumbent will work with the senior software engineer who will establish day-to-day tasks and set longer-term goals and priorities. Duties include assisting scientists who are developing and running the FV3GFS. This position will report to the Informatics, Visualization, and Outreach Section Chief.

Software Development 90%
- Support the software infrastructure including source code, configuration files and scripts.
- Parallelization and optimization using OpenMP
- Porting to new systems,
- Code development
- Fixing bugs
- Assist with configuration, testing and running of the FV3GFS model.

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 include:
- 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.
- BS in applied math, computer science, or physical sciences AND At least 3 years of relevant professional experience OR MS in applied math, computer science, or physical sciences
- At least 2 years of software development experience.
Minimum of 2 years of experience programming in Fortran, C or similar high-level language
2 or more years of experience with the Linux or Unix operating systems
Proficiency in shell scripting including C-shell, K-shell, or similar

Highly desired qualifications include:
Parallel programming skills
Experience with OpenMP and MPI
Demonstrated ability to work in a team
Proven ability to work independently on well-defined tasks.
The ability to effectively communicate technical concepts via oral presentations and written report.

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 July 29, 2018. Apply electronically by clicking “Apply to this Job” at the following website: https://jobs.colostate.edu/postings/58281. References will not be contacted without prior notification of candidates. Please be sure to address the required qualifications in the application materials.