

CIWRO Research Associate - MRMS Hydro-Meteorological Analyst

The Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO, formerly CIMMS) at the University of Oklahoma in Norman Oklahoma is currently seeking a research associate to assist and support scientists in the National Severe Storms Laboratory's (NSSL) Warning Research & Development Division on the development of scientific applications, algorithms, and applied research related to improving Multi Radar/Multi Sensor (MRMS) quantitative precipitation estimates (QPEs) and other hydrological applications used by operational forecasters in the warning decision-making process for flash flood and river flooding events. MRMS is an operational software system that contains a number of algorithms used to ingest multiple sources of environmental information, analyze the data and produce severe weather, hydro-meteorological and transportation based products, many of which are used by National Weather Service (NWS) forecasters as well as the private sector and academia.

The duties of this position are:

1. Supporting the effort to reduce range-dependent uncertainties in the MRMS radar QPEs. This includes but not limited to the refinement of the MRMS Dual Pol Vertical Profile of Reflectivity algorithm used to correct reflectivity within and above the melting layer via basic and/or applied research and development
2. Assisting the development and integration into MRMS of a Snow QPE algorithm, utilizing Dual Pol radar variables, to validate/verify its performance as part of a long term effort to improve MRMS frozen precipitation estimates.
3. To support the further refinement of a new Melting Layer Diagnostic Analysis algorithm utilizing Dual Pol radar information.
4. Attend meetings and professional conferences to present research results and interact with collaborators and users; assist in the preparation of publications to describe results when appropriate
5. Review technical and professional publications and attend seminars to stay abreast of current developments in meteorological and remote sensing science

The minimum qualifications for the position are:

1. A M.S. Degree in Meteorology, Atmospheric Science, or related area, or a M.S. Computer Science preferably with experience working in meteorological applications
2. Two years of experience in scientific programming on UNIX/Linux based computers using a high level language (e.g. C, C++, Python)
3. Experience with statistical methods and software for meteorological data analysis and visualization (e.g. MATLAB, GIS, S+ etc.)
4. Ability to communicate results with colleagues and through presentations and technical documents

Applicants should identify expertise with any of the following areas: Remote Sensed Precipitation Estimates and Measurements; Flooding; Hydrology; Weather Radar; Satellite; Statistics; Warning Decision Making; Numerical Modeling, Cloud Processing, Machine Learning. Strong oral and written communication skills are needed for the position. Please indicate experience with Linux (or UNIX) operating systems, programming skills (including web-based and mobile applications), Cloud processing, MATLAB and Geographic Information Systems.

Normal working hours will be observed except for occasional irregular hours during data collection, field experiments or workshops conducted at remote sites. Incumbents will receive training and gain expertise in the latest radar and other remote sensing technology and warning decision-making.

Supervision will be provided by CIWRO staff while technical oversight will be provided by CIWRO staff, NSSL scientists, and NSSL management. Incumbent works under general supervision but is expected to determine action to be taken in handling all but unique situations. Incumbents in this position are not expected to supervise other employees.

The beginning salary will be based on qualifications and experience with University benefits. Information on benefits may be found at <http://www.hr.ou.edu>. The position is expected to begin February 2022.

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

University of Oklahoma CIWRO
120 David L. Boren Blvd., Suite 2100
Norman, OK 73072-7304
ciwro-careers@ou.edu
ATTN: RA-MRMS Hydro

The University of Oklahoma is an equal opportunity/Affirmative Action employer.

The University of Oklahoma has a mandatory COVID-19 vaccine requirement, with exceptions only for approved medical or religious accommodations. As a condition of employment, newly hired employees must provide proof of vaccination or initiate the accommodations process before their first day of employment.