Research Scientist – MRMS Radar Data Quality Control

Position Description

Discover your potential as a career-track Research Scientist with the Stormscale Hydromet Analysis and Remote Sensing Processes (SHARP) Team at The University of Oklahoma's Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO), in collaboration with NOAA's National Severe Storms Laboratory (NSSL). This role presents an exciting opportunity to shape the future of weather radar applications and contribute to cutting-edge research and development. We are seeking an enthusiastic and collaborative individual that looks to develop and advance radar-based science here at CIWRO.

Overview

The SHARP team develops and transition state-of-the-art techniques and products designed to improve radar data fields and radar-derived precipitation estimations. These products and techniques are integrated into real-time applications within the Multi-Radar Multi-Sensor (MRMS) system (https://www.nssl.noaa.gov/projects/mrms/). MRMS system consists of fully-automated algorithms that quickly and intelligently integrate data streams from multiple radars, surface and upper air observations, lightning detection systems, satellite observations, and forecast models. Numerous two-dimensional multiple-sensor products offer assistance for hail, wind, tornado, quantitative precipitation estimations, convection icing, and turbulence diagnosis. Our mission encompasses the integration and development of advanced observations, models, and computational techniques as well as improve data quality for various hydrometeorological applications through new and advanced research and development projects.

As a member of our team, you will drive advancements in weather radar data and applications. Your role will involve contributing to existing projects and exploring innovative ideas. Examples of projects you may work on include:

- Study the sensitivities of specific attenuation and other radar variables with non-uniform beam blockages, ground clutter, wind farms, hardware issues, and other radar data challenges
- Improve dual-polarization data quality control for wind farms and ground clutter under anomalous propagation conditions and when mixed with precipitation
- Radar data attenuation correction techniques for various radar types
- Implementation of new techniques and algorithms into real-time operational workflows
- Monitoring and troubleshooting/refining algorithms to ensure high-quality performance of various weather radars

Based at the National Weather Center in Norman, OK (https://www.ou.edu/nwc), this position promises not only professional growth and promotion potential but also the chance to impact the broader scientific community. This position requires physical presence in Norman but may permit a hybrid work schedule.

Key Responsibilities

- Acquire the knowledge and skills necessary to support and update the MRMS system codes and techniques
- Work with an interdisciplinary team of scientists and engineers to design, develop, and implement enhancements and improvements to the MRMS system

- Assist in developing a new infrastructure that will be the basis for the next generation of the MRMS software systems for potential operational use by the NWS
- Prepare documentation on scientific activities, including conference presentations and journal publications
- Perform related duties as assigned

Qualifications

We are looking for candidates who possess:

- Ph.D. in Meteorology, Atmospheric Science, or a related field
- Demonstrate expertise in one or more topics: radar meteorology, radar data processes and variables, and radar data quality control
- Proficiency in languages like C++, Perl, and/or Python as well as Linux/Unix platforms
- Proficiency in AWS or other Cloud computing platforms are desired but not required
- Strong ability to research, troubleshoot, and independently resolve unfamiliar problems
- Excellent oral and written communication skills with an ability to work both independently and cooperatively with others

Benefits and Work-Life Balance

Joining our team comes with numerous benefits, including:

- Competitive salary based on experience; comprehensive university benefits (http://hr.ou.edu/).
- Generous paid leave, encompassing 15 paid holidays and 22 hours of accrued paid time off per month.
- Reduced membership at the University of Oklahoma's state-of-the-art fitness and aquatic center (https://www.ou.edu/far).

More details about working at the University of Oklahoma, benefits packages, as well as living in Norman, Oklahoma are provided on our website: https://jobs.ou.edu/Discover-OU.

We are dedicated to promoting a healthy work-life balance by championing a flexible work culture, offering adaptable work hours and a hybrid work arrangement. This empowering framework enables team members to seamlessly navigate personal commitments while effectively contributing to their professional responsibilities.

Application Process

Applications should be sent to ciwro-careers@ou.edu, "**Attn: MRMS Radar QC**," and include a cover letter, the applicant's curriculum vitae, and names and contact information of three references. The cover letter must highlight the applicant's interest in the position and describe how the applicant meets the position qualifications. Applications will be accepted until the position is filled. The starting date is negotiable.

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