



Research Scientist - SPARK Team

Position Description

Discover your potential as a career-track Research Scientist with the Storm Processes Analysis, Research, and Knowledge (SPARK) 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 be part of a highly collaborative team interested in understanding convective storm-scale processes and exploring transitions of cutting-edge research into operations. We are seeking an enthusiastic individual who thrives in collaborative environments and is passionate about providing storm-scale analysis of numerical model data and observations collected on various field projects.

Overview

The SPARK team is a group of research meteorologists who work closely with scientists at CIWRO, NSSL, and other organizations to drive our understanding of convective weather processes, hazards, and impacts. The purpose of our team is to increase our knowledge and process understanding of severe and high-impact convective weather through an emphasis on observational analysis and storm-scale numerical modeling. Our group also focuses on the collection and subsequent analysis of data collected during Verifications of the Origins of Rotation in Tornadoes EXperiment (VORTEX) related field campaigns. Analysis methods employed by members of SPARK include the interrogation of fixed and mobile radar data (e.g., via dual-Doppler synthesis), storm-scale simulations, and environmental analysis.

As a member of our team, you will drive advancements in our understanding of storm-scale processes within severe and high-impact convective weather systems. Your role will involve contributing to existing projects and exploring innovative ideas. Some examples of projects you may work on include:

- Exploring updraft characteristics as they relate to severe hazard generation through numerical weather simulations and radar analysis,
- Developing or modifying existing analysis techniques to address existing challenges in understanding storm-scale processes,
- Performing dual-Doppler analysis on storms,
- Extending existing or creating new datasets comprised of data collected in the field,
- Designing and leading VORTEX-related field campaigns aimed at understanding storm-scale processes.

Based at the National Weather Center in Norman, OK, this position promises not only professional growth and promotion potential but also the chance to impact the broader scientific community through participation in conference and technical meetings. Normal working hours will be routinely observed with some seasonal irregular hours during active field deployments (e.g., field deployments can last 1-5 days, including preparation, travel, and undeploy and refurbishment activities). The incumbent will receive training and gain expertise with the observation platforms available to the CIWRO and NSSL team. Supervision will be provided by CIWRO staff. Technical guidance may be provided by CIWRO or NSSL.

scientists. The incumbent will work under general supervision but is expected to complete work independently while still contributing to the group working environment.

As a small team of research meteorologists supporting meteorological research and development, we pride ourselves on fostering an environment where innovation thrives and individual contributions have a significant impact. Unlike private industry, where rigid hierarchies often stifle creativity, we embrace a culture of collaboration and open dialogue, allowing every team member to shape the direction of our projects. Additionally, our commitment to advancing scientific knowledge and our mission's societal impact offers a deeper sense of purpose and fulfillment in your work. Join us and experience the meaningful difference of working in a dynamic and purpose-driven environment.

Key Responsibilities

- Use your knowledge and skillset to analyze data collected on VORTEX-related field campaigns.
- Examine storm-scale processes in numerical models.
- Work with an interdisciplinary team of scientists to develop and implement enhancements and improvements to analysis methods.
- Explore possible applications of new storm-scale-process knowledge for operational prediction of severe weather hazards.
- Lead design and execution of future field campaigns focused on elucidating storm-scale processes as they relate to severe hazard generation.
- Lead collaboration and publication efforts regarding technical reports, peer-reviewed publications, conference presentations, etc.

Qualifications

- Ph.D. in Meteorology, Atmospheric Science, or a related field
- Demonstrated expertise in one or more areas: convective meteorology, radar meteorology, radar data processes and variables, observational analysis, and numerical modeling
- 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

Desired Attributes

- Proficiency in languages like C++, Perl, and/or Python as well as Linux/Unix platforms are desired but not required
- Proficiency in AWS or other Cloud computing platforms are desired but not required
- Previous experience working with numerical modeling, specifically CM1.
- Previous experience with collection, curation, and analysis of radar data as it relates to severe convective weather and severe hazard generation.
- Previous experience leading individual and/or collaborative research projects.

Benefits and Work-Life Balance

Joining our team comes with numerous benefits, including:

- Competitive salary based on experience and comprehensive university benefits (<http://hr.ou.edu/>).
- Generous paid leave, encompassing 15 paid holidays and 22 hours of 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>).

We are dedicated to promoting a healthy work-life balance by:

- Implementing regular one-on-one meetings with science leads to ensure that project scope and priorities remain clear. This transparent communication channel minimizes ambiguity **and** empowers developers to focus on impactful tasks while aligning with the team's strategic goals.
- 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

To apply, please submit:

- A cover letter highlighting your interest in the position and describing how you meet the position qualifications,
- Your up-to-date resume/CV, and
- A list of three professional references.

Send your application materials to: ciwro-careers@ou.edu. Please use the subject line: "**ATTN: SPARK.**" 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.