Overview
The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University seeks to fill a social science research and evaluation position with the National Oceanic and Atmospheric Administration (NOAA) located at the David Skaggs Research Center (DSRC), Global Systems Laboratory (GSL) in Boulder, CO.

The position will be for a social science researcher with a background in qualitative and quantitative social science research and evaluation methods to serve as the Evaluation Researcher for the Fire Weather Testbed (FWT) within GSL. The Evaluation Researcher will design and implement experiments and evaluations in the FWT of new and emerging fire weather products, information, services, technologies, and communication techniques. This will include evaluating how, if at all, weather forecasters use new and existing fire weather and smoke products, how these products support current and future decision-making paradigms, and how these new products and services support risk communication to end-users.

This position sits within the Weather Informatics and Decision Support (WIDS) Division as part of the interdisciplinary FWT team. The incumbent’s office will be in Boulder, CO at a Federal building and requires the ability to pass a National Agency Check with Inquiries (NACI, Tier 1 federal background check). An onsite presence at the GSL in Boulder, CO, is desired two (2) days a week with the option to telework three (3) days a week. However, fully remote work options will be considered with semi-frequent travel to Boulder required for in-person evaluations.

Background
The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University (CSU) is a multi-million dollar research organization located on CSU's Foothills Campus in Fort Collins, Colorado. CIRA is a cooperative institute that is also a research department within CSU's College of Engineering, in partnership with the Department of Atmospheric Science. Its vision is to conduct interdisciplinary research in the atmospheric sciences by entraining skills beyond the meteorological disciplines, exploiting advances in engineering and computer science, facilitating transitional activity between pure and applied research, leveraging both national and international resources and partnerships, and assisting NOAA, Colorado State University, the State of Colorado, and the Nation through the application of our research to areas of societal benefit.

NOAA’s Global Systems Laboratory (GSL) is a federal science and research laboratory under NOAA’s Office of Oceanic and Atmospheric Research. GSL provides the National Weather
Service (NWS) and the nation with environmental observing, prediction, computer, visualization, and information systems. These systems deliver data, forecasts, and predictions of weather, including severe weather events, within the next few minutes to weeks away. GSL is a leader in the applied research, directed development, and technology transfer of environmental data, models, products, and services that enhance environmental understanding with the outcome of supporting commerce, protecting life and property, and promoting a scientifically literate public.

The FWT is a new NOAA testbed dedicated to serving the wildfire communities through pursuing improvements to fire weather forecasting and decision support services. These improvements will be achieved by connecting stakeholders and their information needs to the scientific research and development communities. The FWT is a physical and virtual environment designed to bring the wildfire community together, with an end goal of a safer society and healthier environment achieved through scientific and technological advances. Numerous experiments will be conducted in the FWT and will include a broad spectrum of science fields including atmospheric, geophysical, hydrologic, and environmental sciences as well as social and behavioral sciences. The Evaluation Researcher will be expected to design and implement a wide variety of evaluations from surveys, focus groups, and virtual evaluations to week-long in-person evaluations and field experiments.

**Position Overview**

CIRA is seeking a social science researcher with a background in qualitative and quantitative social science research and evaluation methods. The successful candidate will design and implement evaluations in the FWT from a human-centric and usability perspective. This will include evaluating how weather forecasters (NWS Forecasters, Incident Meteorologists and other forecasters) use and interact with new and/or existing information, tools, and products, and how that information is communicated to and used by (but not limited to) emergency managers, fire managers and practitioners, incident commanders, government safety officials, and other users.

The Evaluation Researcher is expected to design, implement, and report on up to a dozen or more wide-ranging evaluations in the FWT each year. The Evaluation Researcher will work with Principal Investigators, product developers, and the FWT team to identify questions pertaining to usability and user-needs to ensure that evaluations are designed to effectively answer those questions. The researcher will also collaborate closely with the User Needs Assessment Team of the FWT and GSL’s Social and Behavioral Sciences (SBS) Branch about ongoing fire weather-specific social science research.

The Evaluation Researcher will provide subject-matter expertise in the areas of mixed-method, qualitative and quantitative social science. This includes, but is not limited to, evaluation research, workflow and/or task load analysis, and/or decision analysis. The Evaluation Researcher will be responsible for working closely with the other members of the WIDS SBS
Branch, as well as meteorologists and developers. Evaluation topics will be driven by our key partners through the FWT user-needs assessment, ranging from process evaluations of new fire weather applications, product development and refinement, and usability assessments of various fire weather products and services.

The Evaluation Researcher will be expected to lead the development of evaluation reports following each evaluation, as well as scientific publications and presentation of findings at scientific meetings and conferences. This position works very closely with the Federal FWT Manager/Lead Scientist and the SBS Branch Chief, and formally reports to the CIRA Social and Behavioral Scientist. This position will be assigned a classification of Research Associate IV.

**Decision Making Statement**
Decision making depends on the scale of each assignment and issues involved; the chosen course of action may need to be selected from many solutions, dependent upon the end user and technological requirements, and may require coordination with other members of the project team to reach a final decision. Decisions include the assessment of unusual circumstances, variations in approach, and handling of incomplete or conflicting data. This position requires making many decisions concerning things such as interpreting a considerable amount of data, planning the work, or refining methods and techniques. This independent position involves working in coordination with the GSL FWT staff and SBS Branch staff to go over progress, outcomes, and next steps for each evaluation. The individual will set priorities that correspond to importance and/or urgency of particular upgrades and other work activities.

**Position Responsibilities:**

**Preparation and Design of Evaluations, 55%**
- Develop measurable evaluation questions specific to each evaluation in collaboration with product developers and the FWT team. Design evaluations of new fire weather-related tools, technologies, products, services and end-user risk communication from the forecaster to the end-user.
- Conduct relevant literature reviews to ensure evaluation designs, tools and approaches are aligned with best practice in the field.
- Lead and collaborate on developing qualitative (e.g., interview protocols) and quantitative (e.g., surveys) data collection instruments (and associated data management and archival plans) to evaluate how the real-time use of new weather-related forecast technologies, information, products and services are integrated by operational weather forecasters who provide fire weather forecasts and decision support services.
- Lead and collaborate on developing human-centric research approaches for assessing how new fire weather products, information, and services are communicated to different stakeholder groups (e.g., emergency managers, fire managers, incident commanders,
government safety officials) and how that information helps them perform their job duties (e.g., observing emergency managers’ evacuation decisions).

**Conducting and Analyzing Evaluations, 20%**

- Co-lead, or assist in the leading of FWT evaluations using qualitative and quantitative evaluation techniques as referenced above (virtual and/or in-person), analyzing collected data, synthesizing findings, codebook development, and communicating findings (to include scientific publications) to diverse audiences (e.g., Lab Leadership, OAR Leadership, scientific presentations, written reports, etc.).
- Conduct human-computer interaction usability evaluations of users interacting with products, services, systems, or other information and collect behavioral data using techniques and methods common to academic and industry, including but not limited to: one-on-one and focus group interviews, experimental survey design, cognitive workload analysis, eye tracking, mental modeling, and cognitive task analysis.
- Collaborate with the SBS Branch and FWT User Needs Team to identify themes and areas for research exploration as a result of evaluation efforts, as well as areas for improvement in the development of FWT experiments and evaluations.
- Work alongside SBS researchers, FWT User Needs Team, and developers to co-interpret and share evaluation results, implications, and next steps for additional research and future FWT activities.

**Documentation and Reporting, 25%**

- Document findings and recommendations from each evaluation and co-write evaluation reports with the FWT Team.
- Present results and findings to internal audiences (e.g., coworkers, Leadership, etc.) and/or external audiences at workshops and professional meetings and conferences (e.g., the American Meteorological Society, American Evaluation Association, and local, regional, or national fire weather-related conferences).

**Required Qualifications**

In your cover letter, please specifically address EACH requirement as relates to your experience. A cover letter that fails to address the required qualifications for this position may not be considered further after review by the search committee.

**RA IV Requirements**

- Ph.D. in a relevant social or behavioral science or interdisciplinary field such as, but not limited to: evaluation, risk communication, decision science, psychology, sociology, or related field plus
  - two (2) years relevant work experience.
● Ability to pass a National Agency Check with Inquiries (NACI, Tier 1 federal background check), due to the position being located inside a Federal facility;
● Must be legally authorized to work in the United States by the start date. CIRA will not sponsor a visa for this position now nor at any point in the future.
● Well-developed knowledge of and experience employing qualitative and/or quantitative social science and evaluation research methods, including evaluation design, evaluation implementation, collection and monitoring of data, analysis of data, and evaluation reporting. This includes (but is not limited to): at least two (2) years experience conducting qualitative and/or quantitative human subjects social science and evaluation data collection and analysis, including but not limited to, focus groups, workshops, and other methods for gathering participant feedback.
● Leadership and/or project management experience with research and evaluation projects.
● At least 2 years of experience building relationships and collaborating with product developers, program leads, and end-users.
● Familiarity with Institutional Review Board training and regulations (including CITI certification/training).
● General understanding of hazardous weather phenomena.

Desired Qualifications

In your cover letter, please specifically address the applicable preferred qualifications for this position. A cover letter that fails to address the preferred qualifications for this position may not be considered further after review by the search committee.

● Demonstrated ability to work independently and as part of an interdisciplinary research team.
● General familiarity with the types of end-users of fire weather information (e.g., Firefighters, Incident Management Teams, Emergency Managers, etc.)
● Interest in the interactions between weather information and weather-related decision making in the context of public safety and wildland fires.
● Effective written and oral communication skills, both within field of expertise and across disciplinary boundaries, evidenced by cover letter and publishing record.

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, the final
candidate will be required to pass a National Agency Check with Inquiries (NACI, Tier 1 federal background check) because the job is in a federally occupied building.

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 and Details
Applications will be accepted until all positions are filled; however, to ensure full consideration applications should be submitted by midnight, Monday, June 24, 2024.

Apply electronically by clicking “Apply to this Job” at the following website: https://jobs.colostate.edu/postings/145174

Applications must be submitted via online portal. We will not accept materials sent via email or other mode. NOTE: In your cover letter, please specifically address the required and preferred qualifications of this position. A cover letter that fails to address the qualifications of this position may not be further considered after review by the search committee. Likewise, an online application with a generic cover letter or missing a cover letter, and/or an application that does not include current/correct reference contact information may not be further considered after review by the search committee.

CSU is committed to full inclusion of qualified individuals. If you need assistance or accommodations with the search process, please reach out to the listed search contact.

To apply, please upload a cover letter that addresses the required and preferred job qualifications, a resume, and the contact information for three professional references. References will not be contacted without prior notification to candidates.