CASTADE Extreme Weather Postdoctoral Scholar

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The [Climate and Ecosystem Sciences](#) Division at Lawrence Berkeley National Laboratory (Berkeley Lab) invites applications for a CASCADE Extreme Weather Postdoctoral Scholar to join a project aimed at understanding observed changes in extreme weather: the Calibrated and Systematic Characterization, Attribution, and Detection of Extremes (CASCADE) project. Research within CASCADE advances our understanding of climate extremes and enhances our ability to attribute and project changes in extremes. This position calls for an individual with experience in extreme weather/climate phenomena, climate modeling, and statistical analysis. This is an excellent environment for working with a highly skilled interdisciplinary team in the Climate Sciences Department. Berkeley Lab is a renowned center of scientific expertise in many facets of climate-related fundamental and applied science.

You will work closely with a team that is developing multiple advanced methods for detecting and characterizing extreme weather events and their corresponding climatology. The work will focus on developing and or utilizing advanced extreme value analysis and detection methods for a variety of weather processes and phenomena, including: atmospheric rivers, extratropical cyclones, tropical cyclones, fronts, and mesoscale convective systems. The long-term goal of this effort is to understand how natural variability and external forcings (e.g., greenhouse gasses) interact to modulate weather systems associated with extreme precipitation. You will have the opportunity to contribute to the development of methods for application to observational and model-based datasets. The candidate will also have the opportunity to work closely with a vibrant, multidisciplinary team that includes experts in atmospheric science, statistics, and computer science. The position will entail the use of world-class High Performance Computing resources at the National Energy Research Scientific Computing center (NERSC), and it will potentially involve the use and evaluation of a new, cutting edge climate model: the Energy Exascale Earth-system Model (E3SM).

The work will require skills in:

1. Novel and practical application of statistical analyses to relevant problems in climate science and extreme value analysis.
2. Application of a wide array of observations to evaluate weather systems in Earth system models.
3. Investigation of the connections between atmospheric phenomena and their underlying physics and dynamics.
4. Oral and written presentation of results.
5. Ability to work in an integrated team environment.

**What You Will Do:**

- Develop and use advanced methods for detecting extreme weather events in climate simulations.
• Evaluate precipitation statistics, from an event-focused perspective, in observations and climate model output.
• Run and/or use advanced Earth System Models to test hypotheses about how natural variability and external forcing interact to modulate extreme weather systems.
• Author technical reports and peer-reviewed journal articles.
• Work collaboratively in a large multidisciplinary research team.
• Successfully contribute to an active intellectual environment.

What is Required:
• Recent Ph.D. in statistics, atmospheric science, physics, applied mathematics, environmental engineering science, computer science, or a closely related field.
• Demonstrated ability to perform comprehensive analyses making use of different subsets of simulations, evaluation datasets, and advanced analysis techniques.
• Demonstrated proficiency with one or more programming languages (especially R and Python).
• Demonstrated excellent oral and written communications skills for presentation of research.
• Ability to work effectively in a large and integrated team.

The posting shall remain open until the position is filled.

Notes:
• This is a full time, 1 year, postdoctoral appointment with the possibility of renewal based upon satisfactory job performance, continuing availability of funds and ongoing operational needs. You must have less than 4 years paid postdoctoral experience. Salary for Postdoctoral positions depends on years of experience post-degree.
• Full-time, M-F, exempt (monthly paid) from overtime pay.
• This position is represented by a union for collective bargaining purposes.
• Salary will be predetermined based on postdoctoral step rates.
• This position may be subject to a background check. Any convictions will be evaluated to determine if they directly relate to the responsibilities and requirements of the position. Having a conviction history will not automatically disqualify an applicant from being considered for employment.
• Work will be primarily performed at Lawrence Berkeley National Lab, 1 Cyclotron Road, Berkeley, CA.

Berkeley Lab (LBNL) addresses the world’s most urgent scientific challenges by advancing sustainable energy, protecting human health, creating new materials, and revealing the origin and fate of the universe. Founded in 1931, Berkeley Lab’s scientific expertise has been recognized with 13 Nobel prizes. The University of California manages Berkeley Lab for the U.S. Department of Energy’s Office of Science.

Equal Employment Opportunity: Berkeley Lab is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, or protected veteran status. Berkeley Lab is in compliance with the Pay Transparency Nondiscrimination Provision under 41 CFR 60-1.4. Click here to view the poster and supplement: "Equal Employment Opportunity is the Law."