Climate Scientist Postdoctoral Appointee

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Location: Albuquerque, NM -- Full Time, LTE

What Your Job Will Be Like

Do you want to perform innovative and creative research in climate, earth, and atmospheric science? Are you motivated to do research that impacts a broad range of problems of national importance? If so, you could join our dynamic team by being selected as an Atmospheric Science Postdoctoral Appointee! We seek hardworking and dedicated applicants with interests in developing and applying atmospheric and earth science measurement and modeling techniques to scientific and engineering applications relevant to Sandia's diverse mission space. Sandia is currently exploring a variety of applications for this work which involves various projects. You will join a large multidisciplinary team seeking to develop novel attribution tools to enable identification of and assign relative responsibility to ensuing downstream physical impacts from geographically and temporally localized large magnitude events (e.g., volcanos, climate interventions, or the disappearance of Arctic sea ice).

On any given day, you will be called on to:

- Address complex problems in support of broad-ranging mission areas
- Collaborate with highly motivated researchers on challenging research questions using innovative computational resources
- Present your work within leading publication and conference venue
- Work on potential projects which include:
- Simulating the climate response to proposed climate intervention strategies and applying machine learning (or other data analytics techniques) and uncertainty quantification towards risk evaluation
- Development and analysis of climate models such as E3SM with a focus on the coupled climate system (atmosphere, land, ocean and cryo-sphere)
- Atmospheric and laboratory based measurements of ambient conditions including meteorological variables and aerosol/gas phase concentrations. Source-term characterization/development for use in validation modeling scenarios

Qualifications We Require

- PhD in an Atmospheric Science, Earth Sciences, Civil/Environmental Engineering, Physics, Applied Mathematics, Computational Science, or a closely related field
- Proven research experience, as evidenced by strong record of research publications and presentations
- Experience in atmospheric modeling, analysis and/or instrumentation and measurements of at least one of the following:
  - Analyzing, developing, or using components of climate models and climate datasets
  - Coupled models for atmosphere, land, sea, cryo-sphere systems
  - Aerosol measurements and/or modeling
  - Computer languages used for atmospheric modeling and analysis (C, C++, Fortran, Python, Julia, R,, Matlab)
- Ability to obtain and maintain a DOE L-level security clearance

Qualifications We Desire

One or more of the following:
- Experience with downscaling climate models
- Experience with Integrative Assessment Models
- Experience with energy, water, and resource nexus to atmospheric science applications
- Experience with the water cycle research
- Experience with polar regions research
- Experience with stratospheric chemistry
- Familiarity with high performance computing environments
- Proven ability to advance the state-of-the-art in climate science-related subject areas and/or related fields of stability to conduct self-directed research
- Ability to work in multi-disciplinary research environments on problems comprising diverse application domains
- Proven research community leadership through activities such as participation in student or professional organizations, outreach activities, etc.
- Familiarity or experience with data analytics and machine learning methods such as deep learning, reinforcement learning, or another form of artificial intelligence
- International recognition in the research area with an original high-impact publication as evidenced through or a high h-index or citation analysis
- Excellent written and verbal communication and interpersonal skills
- Desire to perform in a dynamic environment and demonstrated interest and/or experience in service to the nation
- Ability to travel for business and research purposes

About Our Team

The staff in the Atmospheric Sciences Department at Sandia National Labs have expertise in atmospheric measurements and modeling. Technical activities cover the spectrum from theory to application, including algorithm development, computer modeling, data inversion, instrumentation and measurement systems development, field demonstration, field campaign execution, and field site management. Particular expertise exists in the measurement and modeling of atmospheric processes in the Arctic including the use of un-manned aerial vehicles such as small, fixed wing and rotary aircraft and tethered balloons, as well as the use and cold hardening of measurement systems such as radar and lidar. The department serves as a Laboratories resource for atmospheric sensing expertise.

About Sandia

Sandia National Laboratories is the nation's premier science and engineering lab for national security and technology innovation, with teams of specialists focused on cutting-edge work in a broad array of areas. Some of the main reasons we love our jobs:

- Challenging work with amazing impact that contributes to security, peace, and freedom worldwide
- Extraordinary co-workers
- Some of the best tools, equipment, and research facilities in the world
- Career advancement and enrichment opportunities
- Flexible work arrangements for many positions include 9/80 (work 80 hours every two weeks, with every other Friday off) and 4/10 (work 4 ten-hour days each week) compressed workweeks, part-time work, and telecommuting (a mix of onsite work and working from home)
- Generous vacations, strong medical and other benefits, competitive 401k, learning opportunities, relocation assistance and amenities aimed at creating a solid work/life balance*

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http://www.sandia.gov
*These benefits vary by job classification.