

What Your Job Will Be Like

We are seeking an Aeronautical Engineer or Atmospheric Scientist to work with a multi-disciplinary team to develop and apply a high-fidelity computational fluid dynamics simulation of turbulent atmospheric flow interactions with wind turbine plants. The capability will be developed within the framework of an object-oriented, massively parallel, computational mechanics code.

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

- Work with a dynamic team of researchers, numerical methods developers, math model developers, and wind energy analysts working to solve challenging multi-physics problems;
- Be assigned computational model and algorithmic development and implementation tasks, as well as tasks related to verification and validation of the simulation capability.

Qualifications We Require

- A PhD in Engineering, Atmospheric Science, Applied Mathematics or Computer Science;
- Demonstrated experience in computational fluid dynamics;
- Knowledge of software design, implementation, and testing;
- The ability to obtain and maintain and DOE L-level security clearance.

Qualifications We Desire

- Experience in incompressible flow CFD methods, mesh generation and turbulence modeling approaches (RANS, LES, DES, Hybrid RANS-LES etc.);
- Experience in modeling wind turbines aerodynamics, atmospheric flows and fluid-structure interactions;
- Experience with parallel programming (Shared and Distributed memory, GPU programming etc.);
- Experience with collaborative software design, development, and testing processes.

Position Information

This postdoctoral position is a temporary position for up to one year, which may be renewed at Sandia's discretion up to five additional years. The PhD must have been conferred within five years prior to employment.

Individuals in postdoctoral positions may bid on regular Sandia positions as internal candidates, and in some cases may be converted to regular career positions during

their term if warranted by ongoing operational needs, continuing availability of funds, and satisfactory job performance.

About Our Team

The Wind Energy Technologies Department performs research and development to improve performance, lower costs, and accelerate the deployment of wind technologies. This department is responsible for all aspects of wind turbine blade design, system reliability, system integration, and environmental evaluations and has been assigned the leadership role by DOE for wind rotor development. The team performs R&D on blade materials, rotor design, structural analysis and design, and manufacturing processes. The department partners with universities in the areas of composite materials, aero-dynamics, probabilistic analysis, and embedded control sensors and actuators. Department activities range from high fidelity modeling and analysis of wind turbines/plants, to lab testing of components, to field testing of wind turbines at the SWiFT test site, near Lubbock, TX.

Hiring Manager

Geoffrey Klise

Security Clearance

Position requires a Department of Energy (DOE)-granted L-level security clearance.

Sandia is required by DOE directive to conduct a pre-employment drug testing, and a pre-employment background review that includes personal reference checks, law enforcement record and credit checks, and employment and education verifications. Applicants for employment must be able to obtain and maintain a DOE L-level security clearance, which requires U.S. citizenship.

Applicants offered employment with Sandia are subject to a federal background investigation to meet the requirements for access to classified information or matter if the duties of the position require a DOE security clearance. Substance abuse or illegal drug use, falsification of information, criminal activity, serious misconduct or other indicators of untrustworthiness can cause a clearance to be denied or terminated by the DOE, rendering the inability to perform the duties assigned and resulting in termination of employment.

EEO

Equal opportunity employer/Disability/Vet/GLBT