

**Location: Albuquerque, NM**  
**Full Time, Temporary**

## What Your Job Will Be Like:

We are seeking a Postdoctoral Appointee to support test programs at the Thermal Test Complex (TTC), a one-of-a-kind national asset, and the Lurance Canyon Burns site.

Key functions of this role include, but are not limited to:

- Working with a dynamic team of fire scientists, engineers, technologists, and trades people to design, build and perform fire and radiant heating experiments supporting nuclear weapons development and qualification missions
- Performing a key role in weapon qualification and model validation, solving challenging problems related to a wide range of fire science and technology applications
- Performing work across a diverse set of non-weapons missions
- Providing insight into physical phenomena of fires and the fate of objects exposed to abnormal thermal environments, generating data for creating and validating heat transfer and thermal response models, and qualifying the safety and performance of nuclear weapons and other systems of relevance to national security
- Using state of the art fire models for experimental design, application of both established and new diagnostics, and deployment of new data reduction and uncertainty quantification techniques
- Performing testing functions with near seamless integration with computational modeling activities
- Traveling as required to speak and present at high-level industry and government forums

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.

## Qualifications We Require:

- PhD, conferred within 5 years prior to employment, in a physical science or engineering discipline
- Experience in the design, fabrication and/or deployment of thermal, mechanical, and/or electrical test systems
- Experience guiding research and working within a team
- Ability to obtain and maintain a DOE Q level clearance

## Qualifications We Desire:

- Experience in the design, fabrication and/or deployment of small or large mechanical and/or electrical test systems
- Experience in experimental analysis of fire, combustion, pyrolysis, or multi-phase flow environments
- Experience in numerical and/or analytical methods for finite element analysis, computational fluid dynamics, heat transfer, and the numerical simulation of fires, combustion, soot generation, or multi-phase reacting flows
- Excellent written and verbal communications skills, including the development and delivery of presentations, proposals, and reports
- History of publication of results in peer-reviewed journals and external presentations at appropriate scientific conferences
- Ability to obtain and maintain a sigma 15 clearance (subject to random polygraph)

## About Our Team:

The Fire Science and Technology Department performs experimental and phenomenological fire research to support Sandia's national security mission. The main focus of the department is to ensure the safety and security needs of nuclear weapons in normal and abnormal thermal environments. The department offers a spectrum of computational and experimental capabilities, combined with a problem-solving focus, for addressing fire-related challenges throughout the government, civilian, and industrial sectors. Efforts in the computational arena include development of physics-based subgrid models for phenomena important to fire dynamics, fire suppression and fire detection. The department maintains and operates state-of-the-art facilities for large-scale radiant heat, open-air, and enclosed fire testing. These facilities are used in conjunction with new diagnostics and experimental capabilities developed and employed to provide data for discovery, validation, and system qualification. The group interacts extensively with complementary technical organizations within the Engineering Sciences Center and across the laboratory. Staff members are also involved in national and international collaborative endeavors with colleagues in academia and government.

## To Apply:

Visit:  
[sandia.gov/careers](https://sandia.gov/careers)  
and search for job  
number **656453**

## About Sandia:

Sandia provides employees with a comprehensive benefits package that includes medical, dental, vision, and a 401(k) with company-match. Our culture values work-life balance; we offer programs such as flexible work schedules with alternate Fridays off, on-site fitness facilities, and three weeks of vacation. In addition, Sandia/California enjoys close proximity to San Francisco, the Silicon Valley, first-tier universities, and diverse cultural and year-round recreational opportunities.

Sandia National Laboratories is the nation's premier science and engineering lab for national security and technology innovation. We are a world-class team of scientists, engineers, technologists, post docs, and visiting researchers all focused on cutting-edge technology, ranging from homeland defense, global security, biotechnology, and environmental preservation to energy and combustion research, computer security, and nuclear defense.