

## Job Description

<b>Job Title:</b>	Post-doctoral Appointee
<b>Job Opening ID:</b>	654799
<b>Location:</b>	Livermore
<b>Full/Part Time:</b>	Full-Time
<b>Regular/Temporary:</b>	Temporary

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### About Sandia

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.

To learn more, visit <http://www.sandia.gov>.

### Department Description

The mission of Sandia/California's Engine Combustion Research Department is to develop the science base needed by industry to build and optimize a new generation of advanced, high-efficiency, clean internal-combustion (IC) engines that use both conventional and alternative fuels. The department is part of Sandia's Combustion Research Facility (CRF), where ~100 scientists, engineers, and technologists conduct basic and applied research to improve our nation's ability to use and control combustion processes efficiently and cleanly. The CRF offers a challenging and stimulating work environment that addresses today's most critical energy and environmental issues, as well as opportunities for personal, professional, and technical growth.

### How To Apply

Visit <http://www.sandia.gov/careers> and search on the job opening ID cited above.

### Job Summary

The Post-Doctoral Appointee Program is designed to recruit outstanding Ph.D. applicants to assist a line organization in meeting its mission objectives and to provide a professional technical work environment with significant growth opportunities for the employee. The Ph.D. must have been conferred within one to five years prior to employment. These assignments are for a one-year period, with the option at management's discretion to serve no more than five additional one-year assignments.

### **Primary Job Duties**

The Engine Combustion Research Department has an opening for a combustion research postdoctoral fellow. Using state-of-the-art optical and laser-based diagnostic capabilities, the combustion research post doc will investigate the complex, reacting in-cylinder flows in ICEs under the mentorship of Sandia technical staff. This research involves identifying and understanding the controlling physical and chemical processes in new high-efficiency, low-emission engine technologies and advancing diagnostic techniques for investigating these processes. The fundamental understanding gained through this research is used to create models and predictive tools for engine and fuel behavior. The post doc will have the following job responsibilities: conducting and reporting on independent research; participating in program development; and participating in international collaborations with leading engineers and scientists from industry, universities, and other technical institutions.

### **Required qualifications**

Candidates for combustion research post doc positions must have the following qualifications:

- (1) A recent PhD (conferred within the past five years) in engineering, the physical sciences, or a related field
- (2) A strong background and training in thermal sciences, fluid mechanics, and combustion sciences
- (3) Demonstrated accomplishment in experimental research

### **Desired qualifications**

Desired qualifications include:

- (1) Experience with advanced laser-based optical diagnostics and experience with combustion research on engines or other high-pressure systems.
- (2) A working style that demonstrates initiative and a willingness to take on considerable individual responsibility.
- (3) Excellent verbal- and written-communication skills.
- (4) The ability to work effectively in a teaming environment.

### **Security Clearance**

This position does not require a Department of Energy (DOE)-granted security clearance.

Sandia will conduct a pre-employment background review that includes personal reference checks, law enforcement record checks, and employment and education verifications. Further, employees in New Mexico must pass a U.S. Air Force background screen for access to the work site. Substance abuse or illegal drug use, falsification of information, criminal activity, serious

misconduct or other indicators of untrustworthiness can cause access to be denied or terminated, rendering the inability to perform the duties assigned and resulting in termination of employment.

If hired without a clearance, and one subsequently becomes required or you bid on positions that require a DOE-granted security clearance, a pre-processing background review that includes personal reference checks, law enforcement record and credit checks, and employment and education verifications may be conducted prior to a required federal background investigation. Applicants for DOE-granted security clearances must be U.S. citizens and be able to obtain and maintain the appropriate DOE security clearance as required for the position.

### **Benefits**

At Sandia you will receive many benefits as a valued employee of a premier national multi-program engineering and science research laboratory. In our Total Rewards package you will enjoy competitive pay, great benefits, a stimulating, positive environment and learning opportunities that will help build your career. More information may be found on our Careers website.

### **EEO**

Sandia National Laboratories is an Equal Opportunity Employer M/F/D/V.