



POSITION: Energy Systems Engineer

JOB ID: 62385

MANAGER: Chris Moen

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DEPARTMENT DESCRIPTION

Sandia/California's Thermal/Fluid Science and Engineering department, which is part of Sandia's Transportation Energy Center, is a multidisciplinary group of engineers and technologists who specialize in fluid mechanics and heat and mass transfer. The work mix spans the spectrum from theory and scientific computing to mechanical design and applied experimentation. The group's three primary roles in science-based engineering at Sandia/California include (1) developing new computational methods and tools to describe fluid mechanics and heat transfer; (2) performing computational analyses to predict the design performance of engineered systems; and (3) designing, building, and testing prototype systems. Recent activities within the group include hydrogen storage and safety technology, combustion and heat transfer modeling, and material process modeling.

JOB DESCRIPTION

We are seeking an energy systems engineer to assist with prototype development and applied research for low-carbon transportation technologies. Our current focus is on hydrogen storage and safety for fuel cell vehicles. We anticipate growth in the areas of biofuels and electric vehicles through Sandia's Hub for Innovation in the Transportation Energy Community (HITEC), which has a Web site at <http://www.hitectransportation.org/sandia/>. Our department works on a dynamic and ever-changing set of problems. The engineer may work on several different tasks concurrently and must be able to apply broad research results to impact engineering development projects. While the engineer may have specific skills in experimentation or computational simulation, the engineer must integrate contributions from materials science, chemistry, engineering experiments, and modeling.

QUALIFICATIONS

This position requires a masters degree in mechanical, chemical, or aerospace engineering. In addition, candidates must have experience with design for heat and mass transfer in either computational simulation (computational fluid dynamics experience with both compressible and incompressible flows and chemical reactions is desired) or experimentation (experience in material property evaluation and temperature and flow measurement in chemically reacting systems is desired). Candidates should be able to synthesize information from physical and numerical experiments to solve engineering problems while employing an appropriate combination of analytical and computational techniques. Candidates must also be flexible, have excellent communication and teamwork skills, and be able to rapidly master new engineering science topics.

Candidate must be able to obtain a U.S. Department of Energy security clearance for this position. To obtain a security clearance, U.S. citizenship is required.

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