# Postdoctoral Appointee – Radiation Detection and Identification

Sandia National Laboratories

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

**What Your Job Will Be Like**

**Are you passionate about your work and dream of utilizing state-of-the-art facilities to explore solutions? Join a dynamic team that solves significant issues and challenges for our nation's security!**

We are seeking a Postdoctoral Appointee to work on radiation detection and help to solve identification issues. Our team develops and maintains Gamma Detector Response and Analysis Software (GADRAS) for the rapid analysis of gamma spectra, gamma detector response simulation, and radiation transport. The software combines the detector response function with full spectrum analysis and is the gold standard for fast identification of radiation sources. The selected applicant will have the following opportunities:

- Software development, algorithm development and improvement
- Detector characterization experiments to identify issues of national importance
- Collaborate with other departments in the development of advanced R&D capability to support the NIRP and related missions.

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

- Develop and use analysis algorithms for radiation detectors, radiation transport software and perform laboratory measurements
- Further develop neutron transport and analysis methods for multiplicity detectors
- Collaborate on a core team of five staff to develop software and perform measurements to improve real-world capabilities to detect and characterize radiation sources

**Qualifications We Require**

- Ph.D. in Nuclear Engineering or related field, obtained within the last 5 years
- Experience with, and understanding of, radiation transport
- Proficiency in software development skills (i.e. C++, C#, or FORTRAN)

**Qualifications We Desire**

- Experience measuring radioactive sources using radiation detectors
- Proficiency with Linux commands and experience with object-oriented programming
- Experience using radiation transport software (especially GADRAS)
- Proficiency with varied communication methods, including oral presentation, preparation of high-impact visual presentations, written reports, and the ability to clearly and concisely communicate scientific and technical information

**About Our Team**

We perform applied research and development for WMD detectors and associated assessment algorithm and software tool development, conduct field testing and data collection, and provide leadership and support for real world responses to nuclear/radiological incidents. Some department personnel lead and support key aspects of Sandia's Nuclear Incident Response Program (NIRP) that are led out of our group, 6630. We have a solid core customer base through DOE NNSA NA20 and NA80 and support non-DOE customers including DoD, FBI, and DHS. We have an established reputation with government agencies and commercial industry in the field of radiation detection and assessment and trace explosives detection.