

**Job Code:** LAB-OR5122**Title:** Scientist 2**FLSA:** EX**Function:** Scientist**Family:** Science&Engineering**Category:** Research&Development**Active Job Code:** True**Salary Min:** \$76,500**Salary Market:** \$100,900**Salary Max:** \$128,000

Position Overview

The Proton Radiography (pRad) Team in P-25 is seeking candidates for a Scientist 2. Position in the field of charged particle radiography. The team runs the pRad facility at LANSCE at LANL. pRad uses a train of short proton pulses to perform multi-frame radiography study the time development of the interiors of shocked materials and systems in support of the LANL Weapons program and materials science research. Team members also support other Homeland Security projects. We are seeking exceptional candidates whose primary responsibility will be to develop, maintain, and operate the complex Data Acquisition System (DAQ) for these experiments. The successful candidate is also expected to participate in scientific programs, including developing, proposing, and executing experiments, as well as analyzing data and presenting the results in various forums. In addition, he or she must work effectively with personnel from various divisions in stressful situations while maintaining a positive team environment.

Key Position Requirements

The successful candidate must have an experimental physics background and programming experience in DAQ projects, preferable in a small team environment. The Proton Radiography project is multidisciplinary, so the physics specialty of the candidate can be any of a broad range of areas, such as nuclear, particle, shock, accelerator or medical physics. The DAQ is a complex Windows .Net based system. The candidate should have programming experience in Windows .Net programming languages, preferably Visual Basic .Net. The candidate should have experience in DAQ systems spanning multiple computers. Experience with any of the following areas is desirable: FORTRAN, LabView, Web programming, database design and management, image processing, and computer system administration. The candidate should have a record of acquiring and analyzing data on challenging experiments and have participated in the development of a new experimental idea or measurement technique. The successful candidate must be able to present the results of experimental investigations to a broad audience, as evidenced by a history of oral presentations and publications. The candidate should have experience working both independently and within a team of researchers. The candidate should have helped develop, propose, and execute experiments, and analyzed data and presented the results in various forums. This position requires a Q access authorization. Applicants must have the ability to obtain a DOE Q clearance, which normally requires US citizenship.

Job Description

Summary

The scientist 2 is responsible for a broad set of activities within a scientific discipline in support of research and development (R&D) science, which is defined as the application of scientific principles under the scientific method to address technical problems; or to develop novel techniques or principles; or to analyze data or outcomes from experiments (in the real world or in the computational domain) or from observational procedures in the context of the underlying scientific principles or models. Broad experience in a relevant technical discipline is required

Job Duties

1. Safety and security are primary responsibilities for all Laboratory employees. Maintains required safety and security training and assures compliance; makes safety and security an integral part of every task. Takes steps to stop work if unsafe conditions exist or security is compromised.
2. Adheres to scientific policies, programs, procedures and practices.

3. Promotes a mutually respectful work environment that is free from discrimination and harassment and that supports cooperation, teamwork, and resource sharing.
4. Follows the generally-accepted procedure of the Scientific Method, namely: (1) observation of specific phenomena, (2) construction of an hypothesis or hypotheses to explain these phenomena, (3) testing of the hypothesis or hypotheses by experiment or other measurable, empirical techniques, and (4) dissemination of ideas, models, tests, data, and hypotheses to the peer community and beyond.
5. Applies and interprets, on a broad basis, existing scientific principles, techniques, methods and tools to provide solutions for a wide assortment of complex problems
6. Contributes to the design, testing, analysis, verification, and validation of scientific solutions in support of R&D initiatives.
7. Develops technical approach, using creativity in applying standard practices and procedures, and leads technical decisions, including selections of technical alternatives, for assigned work.
8. Develops new methods, techniques or approaches to address critical technical problems. Develops new technical capabilities.
9. Develops technical products such as journal papers and reports. Contributes to the development of intellectual property leading to publications, copyrights, and/or patents.
10. Contributes to the completion of milestones on multiple projects. Contributes to the achievement of programmatic objectives.
11. Sets direction and goals for well-defined tasks involving more than one person. Scopes tasks within a project and defines deliverables at task level. Leads specific project tasks to meet scope, schedule and budget.
12. Actively participates in professional societies, complex interactions, special assignments, and/or external special interest groups. May participate in external working groups and/or assist in organizing meetings and colloquia.
13. Provides peer review of the work of others across organizations or disciplines.
14. Mentors junior staff and peers in technical and professional growth. May mentor students and/or post-docs.
15. Acquires funding support for self and, optionally, for others.
16. Maintains state-of-the-art technical expertise and knowledge within discipline, and develops new skills in related disciplines. May attain additional certifications and/or qualifications, which may include more advanced educational degrees.

Job Knowledge

- Significant knowledge and experience in one or more technical research and development disciplines.
- Demonstrated understanding of principles of scientific integrity.
- Significant knowledge and experience in developing and implementing technical research and development projects including the formulation and testing of hypotheses, investigation of alternative solutions, and recommendation of solutions to technical problems.
- Significant knowledge and experience in formulating and presenting results to technical audiences and readerships.
- Significant knowledge and experience of appropriate safe practices for technical work.

Education

- Typical educational requirement is a bachelor's, master's, or doctorate degree in science from an accredited college or university.

Direction

A. Supervision Received

- Receives occasional oversight on specific objectives, as well as on complex problems and solutions. Completed work products are subject to supervisory review.

B. Supervision Exercised

- Provides technical coordination and/or guidance to junior staff and peers, as needed.

C. Contacts

- Position typically requires effective networking with peers across the division and/or the Laboratory. May have independent interactions with peers, organizations, and/or sponsors external to the Laboratory.

This description is not intended to be a complete statement of every aspect of the position, but rather to act as a guide to the essential functions to be performed. Assigned functions of this job may vary, and other duties and responsibilities may be assigned or changed at the discretion of management.

Notes

Candidates must submit a written cover letter addressing their ability to be successful in the position. Candidates chosen for interview will be required to present a scientific seminar to P-25 and provide letters of reference. Physical Job Requirements: working alone, working overtime or irregular schedule, domestic/foreign travel, work near sources of ionizing radiation, work near sources on non-ionizing radiation, work with weapons or explosives, safety glasses or eye protection, safety shoes or protective foot gear.