

**Job Code:** LAB-OR5123**Title:** Scientist 3**FLSA:** EX**Function:** Scientist**Family:** Science&Engineering**Category:** Research&Development**Active Job Code:** True**Salary Min:** \$83,100**Salary Market:** \$111,700**Salary Max:** \$142,500

## Position Overview

The Proton Radiography (pRad) Team in P-25 is seeking candidates for a Scientist 3. 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 played a leadership role in acquiring and analyzing data on challenging experiments and have developed 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 as the leader of a team of researchers. The candidate should have a record of developing, proposing, and executing experiments, as well as analyzing data and presenting 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 3 is responsible for leading a broad set of activities across several scientific disciplines 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. Capable professional with expertise in several relevant disciplines or in a narrow, specialized field.

### 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, on a broad basis, scientific principles, techniques, methods and tools to provide solutions for an extensive and diverse range of complex and/or ambiguous problems where analysis of situations or data requires in-depth evaluation of variable factors.
6. Leads the research, design, testing, analysis, verification, and validation of cross-disciplinary, or highly and/or narrowly specialized, novel scientific and technological solutions in support of R&D initiatives.
7. Develops innovative advanced concepts, theories, methods, techniques and approaches to address specialized problems. May contribute to the development of technical standards. Develops new technical capabilities and creates opportunities to extend existing science through the expansion of existing efforts.
8. Leads the development of technical products such as journal papers, reports, presentations, and concept papers. Develops intellectual property leading to publications, copyrights, and/or patents. May contribute to technology transfer.
9. Influences organizational, project, and program strategies and directions. Leads technical decision-making at task level within a project. Makes decisions and/or recommendations that influence the achievement of key programmatic objectives.
10. Uses project assignments to further organizational goals. Develops and implements project management plans, including scope, schedule, and budget, for small to moderate projects and/or major project tasks. Defines deliverables at project or major task level.
11. Actively participates in professional societies, complex interactions, special assignments, and/or external collaborations. Participates in external working groups and/or assists in organizing meetings and colloquia.
12. Leads peer review of the work of others within own organization and participates in peer review across organizations or disciplines.
13. Enhances technical and professional expertise of junior staff through active mentoring and training.
14. Develops ideas for new proposals and business development opportunities. Leads development of technical section of small to moderate proposals.
15. Acquires internal/external funding for self and others.
16. Contributes to developments in discipline, and develops new skills consistent with state-of-the-art. May attain additional certifications, qualifications, and/or professional recognitions.

### **Job Knowledge**

- Thorough knowledge and experience in one or more technical research and development disciplines.
- Thorough understanding of principles of scientific integrity.
- Thorough 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.
- Thorough knowledge and experience in formulating and presenting results to technical audiences and readerships.
- Thorough knowledge and experience of appropriate safe practices for technical work.

### **Education**

- Typical educational requirement is an advanced degree in science from an accredited college or university.

### Direction

#### A. Supervision Received

- Receives nominal supervision on all except the most complex problems and solutions.

#### B. Supervision Exercised

- Coordinates and monitors the work of junior staff and peers. Provides technical direction to multiple teams for organizational initiatives.

#### C. Contacts

- Position typically requires ability to build effective multi-disciplinary teams and to interact with directorate-wide networks. Represents the Laboratory to external agencies in limited and defined capacities. Interacts routinely with Laboratory middle- and senior-level management.

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.