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Description

Job Title   **Radio-Frequency Remote Sensing Scientist 2/3**
Location   **03-2322-2402-OFF**
Organization Name   **ISR-2/Space & Remote Sensing**

What You Will Do

The Space and Remote Sensing Group (ISR-2) at Los Alamos National Laboratory is seeking qualified radio-frequency (RF) remote sensing scientists to participate in the execution of our portfolio of RF-based programs. These programs include: scientific studies in lightning science, ionospheric physics and radio astronomy; ground-based and satellite-based nuclear electromagnetic pulse (EMP) monitoring; ground-based detection and analysis of anthropogenic RF emissions; the development, deployment, and operation of RF remote sensing instrumentation; and the development of signal processing and analysis techniques for RF data. Each of the program areas involves one or more of the following general types of work:

- Source-to-sensor modeling, including the modeling of source physics, signal propagation, sensor performance, and the validation of processing and analysis algorithms
- The development of algorithms and techniques for RF signal detection, characterization, geolocation and discrimination
- The design, execution and analysis of hypothesis-testing RF-based scientific experiments
- The design of new RF sensors and signal analysis techniques
- Theoretical understanding of RF source physics, ionospheric radio wave propagation and signal processing techniques
- Digital signal processing
- The scientific and statistical analysis of RF and associated data

What You Need

Minimum Job Requirements:

Scientist 2 (Salary range $84,300 - $139,000):

- Demonstrated knowledge and experience with conducting basic and/or applied scientific research that is relevant to one or more of the above-mentioned program areas
- Knowledge and experience with electromagnetic theory and its applications to practical problems
- Some combination of experience with applied mathematics, scientific data analysis, and the practical use of digital signal analysis (including time-series, spectral, statistical, and hypothesis-testing approaches, especially as applied to large data sets)

- Significant experience with scientific computing and demonstrable knowledge of one or more scientific programming languages (especially PYTHON, MATLAB, or IDL)
- Demonstrated ability to interact effectively in a team environment
- Demonstrated ability to express ideas clearly in written and oral communications including a history of publishing in refereed scientific journals
- Professional scientific work experience following a graduate degree (e.g., postdoctoral research)
- Ability to obtain and maintain a DOE Q clearance (generally requires U.S. citizenship)

Additional Job Requirements for Scientist 3 (Salary range $92,600 - $154,600):

- A record of technical leadership in one or more subfields
- Project management experience (including personnel management, budgets, etc.)
- Professional scientific work experience for a minimum of 5 years following a graduate degree
- Experience mentoring students and/or postdocs
- Have a demonstrated record of excellence in research by a strong peer-reviewed publication record, invited talks, and citation record

Desired Skills:

- Experience in atmospheric science, plasma physics, ionospheric physics, radio astronomy, astrophysics, or lightning science
- Experience with the development, deployment and operation of RF sensors, antennas or measurement techniques
- Experience with laboratory and/or field use of RF instrumentation
- Experience with satellite sensors and programs
- Experience in large data-set management and exploitation

Education: PhD degree in physics/engineering or related discipline or equivalent combination of education and relevant experience.

Where You Will Work

Located in northern New Mexico, Los Alamos National Laboratory (LANL) is a multidisciplinary research institution engaged in strategic science on behalf of national security. LANL enhances national security by ensuring the safety and reliability of the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction, and solving problems related to energy, environment, infrastructure, health, and global security concerns.

ISR-2 develops and applies remote sensing capabilities (RF, infrared, and optical) to support global security and conduct scientific research in related fields. The Group maintains multi-disciplinary programs in theory, modeling, instrumentation, experimentation, field deployment, data analysis and data exploitation.

Additional Details:

Clearance: Q(Position will be cleared to this level). Applicants selected will be subject to a Federal background investigation and must meet eligibility requirements* for access to classified matter.

*Eligibility requirements: To obtain a clearance, an individual must be at least 18 years of age; U.S. citizenship is required except in very limited circumstances. See DOE Order 472.2 for additional information.

New-Employment Drug Test: The Laboratory requires successful applicants to complete a new-employment drug test and maintains a substance abuse policy that includes random drug testing.

Regular position: Term status Laboratory employees applying for regular-status positions are converted to a regular status only with approval of the cognizant Principal Associate Director.

Equal Opportunity: Los Alamos National Laboratory is an equal opportunity employer and supports a diverse and inclusive

workforce. All employment practices are based on qualification and merit, without regards to race, color, national origin, ancestry, religion, age, sex, gender identity, sexual orientation or preference, marital status or spousal affiliation, physical or mental disability, medical conditions, pregnancy, status as a protected veteran, genetic information, or citizenship within the limits imposed by federal laws and regulations. The Laboratory is also committed to making our workplace accessible to individuals with disabilities and will provide reasonable accommodations, upon request, for individuals to participate in the application and hiring process. To request such an accommodation, please send an email to applyhelp@lanl.gov or call 1-505-665-4444 option 1.

Minimum Salary
Maximum Salary
Appointment Type **Regular**
Regular
Posting Scope **External**
External

Contact Details

Contact Name Frary, Suzanne R
Email suzannef@lanl.gov
Work Telephone

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