Vacancy Name: IRC73942  
Job Title: Scientist 2 (Computational Earth Scientist)  
Organization Name: EES-16 / Computational Earth Science

What You Will Do

Become part of a team that thrives on challenge, innovation, and mission-driven science. The Computational Earth Science Group (https://www.lanl.gov/EES-16) in the Earth and Environmental Sciences (https://ees.lanl.gov) Division at Los Alamos National Laboratory (https://www.lanl.gov/) is seeking early- to mid-career scientists and engineers specializing in machine learning applied to earth science challenges to join us in our efforts to meet the nation’s earth science, environmental science, energy development, and national security challenges.

The Computational Earth Science Group focuses on a broad array of energy, environmental, and national security challenges including:

- **Energy**: carbon sequestration, geothermal energy, wind energy, unconventional oil & gas and hydraulic fracturing, energy-water nexus, nuclear energy, energy storage, energy infrastructure.
- **Environment**: hydrogeology, surface hydrology, climate impacts and extreme events, wildland and urban fire, environmental management.
- **National & global security**: non-proliferation, nuclear event detection, climate impacts & regional stability, nuclear waste management.

The Computational Earth Science Group addresses these challenges using multiple computational techniques and simulation tools including computational fluid dynamics (CFD), machine learning, reduced-order modeling, massively parallel high-performance computing (HPC), data analytics, physics-based models of the environment, hydrological models, GIScience/GIS, and operations research/optimization. The Group’s research includes both fundamental and applied science ranging from subsurface to atmospheric phenomena, including collaboration with experimentalists to measure unique subsurface, surface, and atmospheric signatures.

The Research Scientist 2 position generally follows one or more postdoctoral assignments; only exceptional candidates without such experience will be competitive. The successful applicant, will develop and apply machine learning techniques to emerging projects in the Group including applications related to hydrocarbon extraction in the oil and gas industry and geothermal energy development. We welcome applications from a broad range of machine learning applied to earth sciences. The ideal applicant will have developed and applied machine learning techniques to one or more of the applications listed in the Group challenges above.

What You Need

Minimum Job Requirements:
• A demonstrated background in a specific earth science subject area related to a focus area of the Computational Earth Science Group.
• A demonstrated background in computational physics, computational science, or computer science with earth science applications.
• A demonstrated background in applied mathematics, machine learning, model analysis, or data analytics.
• A record of scientific productivity through publications in peer-reviewed journals.

Desired Skills:

• Ability to work productively in a multidisciplinary team environment.
• Strong written and verbal communication skills.
• Ability to obtain a Q clearance, which usually requires U.S. citizenship.

Education: We are looking for scientists and engineers who have at least completed a postdoctoral appointment beyond Ph.D. or an equivalent of education and work experience. Typically, a candidate will have a Ph.D. in earth science, applied mathematics, engineering, computer science, hydrology, geography, physics, or a related field.

Notes to Applicants: Interested applicants should submit a curriculum vitae (CV) and a cover letter (up to 2 pages) that outlines their background and, where appropriate, experience related to one or more Group challenges in energy, environment, and national & global security. The cover letter should directly address the minimum job requirements and desired skills outlined above. For more information please contact Subsurface Flow and Transport Team Leader Satish Karra (satkarra@lanl.gov) or Applied Terrestrial, Energy, and Atmospheric Modeling Team Leader Katrina Bennet (kbennett@lanl.gov).

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.

The Earth and Environmental Sciences Division is a multi-program research organization with core capabilities in Geology, Geochemistry, Geophysics, Geomaterials, Geography, Hydrology, Petroleum Engineering, Chemical Engineering, Acoustics, Atmospheric Science, Ecology, Environmental Science, Computational Science, and Geotechnical Engineering. Cross-cutting capabilities and facilities span the needs for laboratory experimentation, field deployments, computing, and data analytics. Capabilities in the Division are organized into groups, which consist of scientists, postdoctoral researchers, technicians, administrators, and students. Most programs within the Division feature multi-discipline teams organized to solve complex problems of national importance.
**Additional Details:**

**No Clearance:** Position does not require a security clearance. Selected candidates will be subject to drug testing and other pre-employment background checks.

**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 regular status.

**Term position:** Regular-status Laboratory employees applying for term-status positions may retain regular status with approval of the cognizant Principle Associate Director.

**Internal Applicants:** Please refer to Laboratory policy [P701](#) for applicant eligibility.

**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.