Postdoctoral Appointee -- Experimental Quantum Information Science
Location: Albuquerque, NM

Sandia National Laboratories

What Your Job Will Be Like

We are seeking a Postdoctoral Appointee to pursue research in semiconductor quantum systems with applications in quantum information science. The research will involve the characterization and operation of spin qubits in silicon and related materials.

In this position you will:

- Utilize knowledge of quantum information processing, qubit control, semiconductor device physics, microwave electronics, and cryogenics measurement techniques to solve complex problems
- Characterize and operate semiconductor-based quantum devices and qubits at dilution refrigerator temperatures.
- Design and execute experiments to understanding specific physical phenomena relevant to semiconductor spin qubits.
- Learn and develop new experimental techniques
- Collaborate with a diverse team, including experimentalists and theorists, with experience in quantum information science.
- Develop and apply your independent vision, creativity, and ability to pursue and achieve R&D milestones.
- Communicate results (through publications and presentations) to sponsors, collaborators, and the broader research community.

About Our Team

The Advanced Silicon Quantum Devices Department of the Advanced Microsystems Group conducts groundbreaking research on semiconductor-based devices for quantum information sciences applications. Our fundamental expertise lies in the operation and development of semiconductor-based quantum dot and donor-based spin qubits. We use our positive relationships within the Microsystems Engineering Sciences and Applications (MESA) foundry facility, the Center for Integrated Nanotechnologies (CINT), and other internal and external organizations to develop advanced solid-state quantum device technologies.

Qualifications We Require

- PhD in Physics, Applied Physics, Electrical Engineering, or related field, conferred within five (5) years prior to employment
- Experience performing original research, demonstrated through a track record of publications in peer-reviewed journals and external presentations at scientific conferences
- Demonstrated experience in one or more of the following areas:
    - Quantum information science or quantum sensing
    - Experimental characterization of quantum systems
    - Semiconductor device operation at cryogenic temperatures
    - Electron or hole transport in nanostructures
    - Magnetic resonance spectroscopy
- Ability to acquire and maintain a DOE Q clearance

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or veteran status

Apply online at:
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Job #: 690972

About Sandia:
Our culture values work-life balance; we offer programs such as flexible work schedules with alternate Fridays off, on-site fitness facilities, and three weeks of vacation. Sandia provides employees with a comprehensive benefits package that includes medical, dental, vision, and a 401(k) with company-match.

Sandia National Laboratories is the nation's premier science and engineering lab for national security and technology innovation. We are a world-class team of scientists, engineers, technologists, post docs, and visiting researchers all focused on cutting-edge technology, ranging from homeland defense, global security, biotechnology, and environmental preservation to energy and combustion research, computer security, and nuclear defense.

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