Materials and Chemical Data Science - Postdoctoral Appointee

Sandia National Laboratories

Location: Albuquerque, NM
Full-Time, Regular

What Your Job Will Be Like

Are you passionate about developing and applying data science and analytics to characterize material microstructure, chemical composition or materials behavior? If so, you will want to consider applying for this opportunity to join our dynamic, multidisciplinary team of materials scientists, chemists, physicists and others. We are seeking a Postdoctoral Appointee to conduct research in the data science to describe, assess and understand a range of chemical and materials characteristics and properties.

On any given day, you may be called on to:

- Plan, conduct, and analyze large data sets ranging from pattern recognition of spectral outputs and 3D microstructural data to mechanical properties from high-throughput testing
- Synthesize data analytics knowledge to provide recommendations for additional and/or complementary research to develop data analytics tools to provide clearer understanding of chemical composition, material properties and improved performance
- Work with Sandia staff in a collaborative team environment on multiscale projects as part of a dynamic technically-challenging research organization
- Effectively communicate accomplishments in presentations at international conferences and publications in peer-reviewed journals

Qualifications We Require

- Your education will include a PhD in Materials Science, Applied Mathematics, Chemistry, Computer Science, Physics or a related discipline plus a bachelor's in a science, technology, engineering or mathematics (STEM) discipline.
- You have experience in data analytics, machine learning or artificial intelligence.
- You have experience with applications in materials or chemical analysis techniques for characterizing chemical composition, diffraction or spectra pattern recognition, or materials physical structure or properties.
- Your effective communication skills are evidenced by a history of publication of results in peer- reviewed journals and external presentations at appropriate scientific conferences.
- You have the ability to obtain and maintain a DOE L Clearance

Qualifications We Desire

- Your background includes a knowledge of materials and chemistry, image analysis, or spectral analysis
- You possess experience in computer programming and use of high-performance computing resources.
- Experience demonstrating teamwork and positive customer interactions
- Proven ability to establish strong collaborations with both computational scientists and experimentalists
- Consistent track record of first-authorship papers in peer-reviewed publications or conference presentations
- Familiarity with use of mathematical package such as Mathlab, Python, or similar tools

About Our Team

The Computational Materials and Data Science Department provides advanced computational analysis that enables materials-based insight and solutions. Capabilities include model development for nanoscalar and mesoscalar materials evolution, interfacial dynamics, defect initiation and propagation, multivariate analysis, and signal processing. We conduct experiments in micromechanics and volumetric flaw distribution to validate our computational work. Our multidisciplinary background and materials science expertise enable mechanistic and physical understanding related to aging and wear of materials such as metals, semiconductors, biomaterials, and polymers in support of DOE nuclear and non-nuclear missions.

Equal opportunity employer/Disability/Vet/GLBT

About Sandia:
Sandia provides employees with a comprehensive benefits package that includes medical, dental, vision, and a 401(k) with company-match. 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 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.