

**Opportunity Title:** Geospatial/Geoscience Data Specialist

**Opportunity Reference Code:** NETL-2018-04-1-Bauer



**Organization** National Energy Technology Laboratory (NETL)

**Reference Code** NETL-2018-04-1-Bauer

**Application Deadline** 4/30/2018 11:59:00 PM Eastern Time Zone

**Description** **TITLE: Geospatial/Geoscience Data Specialist**

**DEPARTMENT: U.S. Department of Energy/National Energy Technology Laboratory (NETL)**

**NETL CONTACT: Jennifer Bauer: Jennifer.bauer@netl.doe.gov**

**DUTY LOCATION: Albany, OR**

**ACADEMIC LEVEL: PhD, MS**

**POSITION INFORMATION: 1-year appointment; full time (40 hours per week) with the possibility of extension**

**CLOSING DATE: 4/30/2018**

**WHO MAY BE CONSIDERED: United States Citizens, LPRs, & Foreign Nationals with appropriate approval which includes F-1 OPT with EAD (STEM extension not valid), J-1 Exchange Visitor, and LPR with EAD**

**SUMMARY:**

Through the Oak Ridge Institute for Science and Education (ORISE) this posting seeks motivated, students interested in performing research as part of geologic and environmental sciences focus area team at NETL. NETL is a multi-disciplinary, scientific and technical-oriented national laboratory. NETL's Research and Innovation Center conducts research to evaluate environmental impacts and risk assessments associated with domestic energy resource development.

Current research integrates geospatial, geostatistical, and geoscience expertise for performing; i) geospatial-based risk assessments related to CO2 storage, unconventional resources, offshore drilling activities, and other energy related activities, ii) developing tools for quantifying risks within various engineered-natural systems, iii) performing spatio-temporal assessments for various domestic energy infrastructure networks, iv) innovating methods and approaches to reduce geologic uncertainty, and v) developing novel tools, applications, and frameworks for improved decision support.

At present, the team is looking for support from applicants with a background combining several of the following areas: spatio-temporal statistics, geostatistics, GIS, machine learning, big data analytics, data visualization, and natural or engineered-natural system modeling. Applicants should have expertise using GIS software systems (e.g., ESRI's ArcGIS, QGIS, or other open source GIS software), scripting languages, such as Python, and statistical software (e.g., Matlab, R, etc.). Applicants with a familiarity with data from engineered-natural systems and knowledge of fuzzy logic and/or machine learning methods are encouraged to apply. Demonstrated education or coursework in advanced mathematics and statistics is also preferred.

As an ORISE research associate you may support geology and geospatial analysis teams to identify, format and integrate key datasets. These datasets are the foundation to conducting advanced research that integrates and quantitatively evaluates key attributes of gas shale, ultra-deep water and frontier regions to estimate potential risks related to oil/natural gas development, and/or carbon storage.

Depending on skills and your background, you may be asked to assist with:

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- Design, development, and integration of an extensive body of existing GIS information, data and metadata.
- Production of both spatial and non-spatial datasets, potentially including, computer-generated maps, graphs, tables and reports.
- Contribution to geospatial resource studies by collecting and analyzing hydrologic, geologic, engineering, and energy resource data, and reviewing and investigating data quality and integrity.
- Application of spatio-temporal statistical analysis, scripting and various other computer related skills to assist in the scientific evaluation of resource (e.g., water, oil, gas, CO<sub>2</sub>) relationships and problems.
- Writing technical reports, manuscripts, and assist with preparation of data for publication.

#### HOW TO APPLY:

Applicants should apply through the Oak Ridge Institute for Science and Education (ORISE) program. The ORISE program provides opportunities for undergraduate students, recent graduates, graduate students, postdoctoral researchers, and faculty researchers to apply classroom knowledge in a real-world setting to learn about NETL's core mission areas.

- Interested applicants should complete the online application at <http://www.ornl.gov/netl/>. For questions or issues, please email both [Terry.Howard@ornl.gov](mailto:Terry.Howard@ornl.gov) and [Kerri.Fomby@ornl.gov](mailto:Kerri.Fomby@ornl.gov).
- In the online application, **list Jennifer Bauer as your requested mentor**. This will associate your application with this research opportunity. Please send a CV to [Jennifer.bauer@netl.doe.gov](mailto:Jennifer.bauer@netl.doe.gov).
- If you have additional questions, please contact Patricia Adkins-Coliane, [Patricia.adkins-coliane@netl.doe.gov](mailto:Patricia.adkins-coliane@netl.doe.gov), who is the NETL Graduate Education Program Manager.

#### Eligibility Requirements

- **Degree:** Master's Degree or Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 )
  - **Communications and Graphics Design** (1 )
  - **Computer, Information, and Data Sciences** (16 )
  - **Earth and Geosciences** (21 )
  - **Engineering** (27 )
  - **Environmental and Marine Sciences** (14 )
  - **Life Health and Medical Sciences** (45 )
  - **Mathematics and Statistics** (10 )
  - **Other Non-Science & Engineering** (13 )
  - **Physics** (16 )
  - **Science & Engineering-related** (1 )
  - **Social and Behavioral Sciences** (28 )