

Opportunity Title: ORNL Geographic Information Systems Post-Master's Research Associate Opportunity Reference Code: ORNL20-06-ESD

Organization Oak Ridge National Laboratory (ORNL)

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Description Oak Ridge National Laboratory (ORNL) is the largest U.S. Department of Energy (DOE) science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy, environment, and security.

> The Environmental Sciences Division (ESD) of ORNL is seeking a Post-Master's Research Associate in Geographic Information Systems (GIS) to join the Remote Sensing and Environmental Informatics group (https://www.ornl.gov/group/rsei). The candidate will contribute to data curation, documentation, and management of environmental data created and used by the NASA Terrestrial Ecology program. The candidate will join an enthusiastic team of developers, data scientists, and environmental scientists working in Remote Sensing and Environmental Informatics to provide integrated data products, data management and delivery systems and services, and data analytics to facilitate research, education, and decision-making in the environmental sciences.

Major Duties and Responsibilities:

- Work with the ORNL Distributed Active Archive Center (DAAC) Ingest team and data providers to track and move datasets through the stages of data publication.
- Develop scripts and approaches for efficient and high-quality QA/QC of datasets ingested into the archive.
- Write dataset documentation for publication into the ORNL DAAC archive.
- Provide scientific and technical support for data distribution tools and services.

The position appointment is for one year, with up to three one year extensions possible (four year maximum), depending on performance, mutual interest, and available funding. The anticipated start date for this position is January 2020, though candidates with later availabilities will receive full consideration. Salaries will be competitive and include benefits.

Qualifications Candidates should currently be pursuing or recently have completed a master's degree in a field related to the earth sciences, physical sciences, biological sciences, or computer sciences.

Preferred Skills:

Required Qualifications

- Strong background in the earth sciences, with terrestrial ecology being particularly useful.
- Experience in working with geospatial data and/or geospatial information systems, including an understanding of geospatial data formats and projections.
- Experience in Linux and shell scripting.

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- Excellent technical writing skills.
- Strong interpersonal skills and experience working in a collaborative team environment.

Preferred Experience

- Experience with remote sensing data.
- Experience with field research in ecology or other earth science.
- Familiarity with scientific software tools (e.g., R, HDF library, netCDF libraries, GDAL, QGIS).
- Programming experience in any language, with Python preferred.
- Familiarity and experience in metadata standards (ISO 19115, NASA Unified Metadata Model, Ecological Markup Language, ...) and conventions (Climate and Forecasting).

Living in East Tennessee: While the opportunity to work at ORNL is an amazing experience in itself, it's easy to overlook everything else East Tennessee has to offer if you haven't had the opportunity to spend time here. From spending your weekends downtown at Knoxville's farmers market, the Rhythm n' Blooms Music Festival, or the Dogwood Arts Festival, to some of the best hiking, kayaking, and camping in the U.S., East Tennessee has something to offer everyone.

The ORNL Post-Master's Research Associate Program is administered by Oak Ridge Associated Universities through its contract with DOE to manage the Oak Ridge Institute for Science and Education (ORISE).

Eligibility
 Degree: Master's Degree received within the last 60 months or anticipated to be received by 5/29/2020 11:59:00 PM.
 Discipline(s):

 Chemistry and Materials Sciences (12.)
 Communications and Graphics Design (3.)
 Computer, Information, and Data Sciences (16.)

- Earth and Geosciences (21 (2))
- Engineering (27.)
- Environmental and Marine Sciences (<u>14</u>)
- Life Health and Medical Sciences (45 ()
- Mathematics and Statistics (10.
- Other Non-Science & Engineering (7_)
- ∘ Physics (<u>16</u>^(∞))
- Social and Behavioral Sciences (28)
- Age: Must be 18 years of age

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