

Kansas Geological Survey (KGS)  
University of Kansas  
Lawrence, Kansas

**POSITION ANNOUNCEMENT**

**POSITION TITLE:** Geophysical Data Analyst

**KU TITLE:** Assistant Researcher

**APPLICATION DEADLINE:** Review begins June 20, 2022, and will continue until a qualified pool of candidates is received.

**TENTATIVE START DATE:** July 5, 2022, exact date is negotiable.

**SALARY, EMPLOYMENT STATUS, AND FRINGE BENEFITS:** Salary is \$47,500 or greater, commensurate with qualifications and experience. Full-time position, contingent on funding, subject to annual review. Benefits include university staff privileges; 176 hours of paid vacation earned per year, 96 hours of sick leave earned per year, nine paid holidays plus one discretionary day; group medical, dental, life insurance, and retirement program options.

**POSITION OVERVIEW:**

This position provides research and field support for a variety of Geophysics Research Program and Field Services projects. Work will include acquiring, formatting, processing, and analysis of various types of active and passive data using both command line and graphical user interface (GUI) software. Geophysical methods are primarily seismic but may also include earthquake seismology and potential fields methods (e.g., GPR, electrical resistivity, magnetic). Use of drone to acquire airborne data is a new area of study and this position will be integral to that research. Preliminarily characterize or interpret near surface geologic features and/or identify potential targets and collaborate on technical reports. Other duties include general field work assisting seismic, water level, and/or drill crews; travel is likely. Primary work location is on-site at KGS, with flexibility for occasional remote work.

**RESPONSIBILITIES:**

**95% Geophysical Research Support**

- 50%: Assist with processing and analysis of various types of both active and passive seismic data including, but not limited to, multi-channel analysis of surface waves (MASW), diffraction imaging, surface wave backscatter, reflection, tomography, and earthquake analysis. Data processing steps include formatting, quality control checks, pre-processing (e.g., assign field geometry and trace editing), noise suppression, and basic velocity analysis. Perform preliminary processing following prescribed steps suitable for the analysis method.
- 25%: Collaborate with geophysicists and geologists to interpret geologic targets and/or seismic events and characterize the subsurface. Perform enhanced analysis or re-processing specifically tuned for relevant targets to detect and image weak seismic signatures and improve the accuracy of and confidence in the interpretation.
- 10%: Collaborate on technical reports, including assisting with writing and making figures.
- 10%: Work with geophysicists developing advanced capabilities for various applications (drone-based, automated systems, innovative downhole and surface seismic sources, etc.).

**5% Field and Section Support**

- Assist with section field crews as needed, including mobilization/demobilization, survey planning and preparation, and data acquisition. Other duties as assigned by supervisor.

**REQUIRED QUALIFICATIONS:**

1. Bachelor's in Geophysics, Geology, Physics, Electrical or Computing Engineering (or related degree with relevant coursework or research) to be completed prior to negotiated start date.
2. Scientific or engineering data analysis experience in academic or professional setting (submission of example(s) will be requested from finalist).
3. Demonstrated experience to follow written and/or oral instructions, and good oral communication skills. Written skills will be evaluated by the quality of the application materials and oral communication skills will be assessed during the interview, by reference checks, and through scientific writing.

**POSITION REQUIREMENTS:**

1. Valid driver's license at onset of employment
2. Willingness to travel away from home-base for extended periods of time (~10 days).
3. Willingness and ability to work outside in possibly extreme weather conditions (~0°F to ~105°F).

**PREFERRED QUALIFICATIONS:**

1. Advanced computing skills (e.g. experience using a specialized scientific or engineering program) and/or computer programming (e.g. C++, Matlab, etc.) experience.
2. Experience operating scientific instruments in a lab or field setting.
3. Experience working independently as evidenced by work experience.

**APPLICATION PROCEDURE:**

Apply online only at <https://employment.ku.edu/staff/22307BR>. Complete the University of Kansas Unclassified Professional Staff profile and upload the required material:

1. Cover letter addressing the required and preferred qualifications and position requirements
2. Resume
3. Contact information for three professional references
4. Example that demonstrates data analysis you have done (e.g., from a previous research position or academic coursework) will be **requested from finalists**
5. Transcripts will be **requested from finalist**

**Review begins June 20, 2022**, and will continue until a qualified pool of applicants is received. For best consideration apply by the review date above.

**CONTACT INFORMATION:**

Annette Delaney, Kansas Geological Survey, University of Kansas. [adelaney@ku.edu](mailto:adelaney@ku.edu) or 785-864-2152.

**KANSAS GEOLOGICAL SURVEY:** The Kansas Geological Survey (KGS) is a research and service division of the University of Kansas that investigates and provides information about the state's geologic and groundwater resources. The KGS has no regulatory authority and does not take positions on natural resource issues.

KGS scientists pursue research related to surface and subsurface geology, energy resources, groundwater, and environmental hazards. They develop innovative tools and techniques, monitor earthquakes and groundwater levels, investigate water-quality concerns, and map the state's surface geology. Their analyses, findings, and data are shared with the scientific community and general public through publications, online resources, and presentations. The KGS also houses thousands of oil and gas and water well records filed with the state over several decades as well as thousands of rock cores and cuttings brought to Earth's surface during oil and gas drilling.

The main headquarters of the KGS is in Lawrence on the west campus of the [University of Kansas](#), and the [KGS Well Sample Library](#) is in Wichita. Between the two locations, the KGS has a staff of approximately 115 employees, including 35 student employees. The KGS reports to the [Vice Chancellor for Research](#) at the University of Kansas and has a 12-member [advisory council](#) to provide review and guidance.

[More...](#)

**LAWRENCE:** A city of approximately 95,000, Lawrence is located on a rolling landscape 35 miles west of the major metropolitan area of Kansas City and 20 miles east of Topeka, the state capital. Home to [Haskell Indian Nations University](#) (<http://www.haskell.edu>) as well as KU, Lawrence offers the cultural and athletic events of a university setting. For more information on Lawrence, please visit the [Lawrence Convention and Visitors Bureau](#) (<http://www.visitlawrence.com>), the [Lawrence CyberVillage](#) (<http://www.ci.lawrence.ks.us>), or the [City of Lawrence](#) (<http://www.lawrenceks.org>) web pages.

*The University of Kansas prohibits discrimination on the basis of race, color, ethnicity, religion, sex, national origin, age, ancestry, disability, status as a veteran, sexual orientation, marital status, parental status, gender identity, gender expression and genetic information in the University's programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Director of the Office of Institutional Opportunity and Access, [IOA@ku.edu](mailto:IOA@ku.edu), 1246 W. Campus Road, Room 153A, Lawrence, KS, 66045, (785)864-6414, 711 TTY.*