

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

POSITION ANNOUNCEMENT

POSITION TITLE: Postdoctoral Researcher

KU TITLE: Postdoctoral Researcher

APPLICATION DEADLINE: Review begins **October 24, 2022**, and will continue until a qualified pool of candidates is received.

TENTATIVE START DATE: **November 28, 2022**, exact start date is negotiable.

SALARY, EMPLOYMENT STATUS, AND FRINGE BENEFITS: This position is funded for three years with an expected salary of \$55,000 annually. Annual professional development budget. Other 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, a retirement program, medical & dental insurance, life and disability insurance, other benefit plan options, and State of Kansas discounts offered by various vendors. KU also offers employees educational and professional development opportunities. The initial appointment will be for one year with the expectation of renewal assuming satisfactory performance.

POSITION OVERVIEW:

Kansas Geological Survey seeks applicants for a full-time postdoctoral research position within the Geophysics/Exploration Services group. The selected candidate will be working as a part of a research team on the development and implementation of approaches based on machine learning (ML) and optimization algorithms in the field of signal processing, seismic imaging and inversion. The position involves developing ML solutions for data analysis with the focus on performing research in the evaluation and improvement of geophysical methods for near-surface characterization. This is a one-year contract with the possibility of an extension.

This position is based at the Kansas Geological Survey, a research center within the University of Kansas. This postdoc will be part of the Geophysics/Exploration Services group and supervised by Dmitry Borisov (dborisov@ku.edu)

RESPONSIBILITIES:

70% - Develop and implement ML based models and neural networks for signal processing and seismic imaging.

20% - Disseminate findings through conference presentations and publications.

10% - Service to the discipline and institution through participation in activities that may include collaboration with other KGS researchers, scientific peer review, serving professional societies, and public outreach and education.

REQUIRED QUALIFICATIONS:

Evaluation of the following requirements will be made through (1) descriptions of research and educational experiences in cover letter, (2) record of accomplishments in resume/curriculum vitae, (3) information from professional references, and (4) transcripts.

1. A relevant Ph.D. in imaging science, computer science, mathematics, physics, earth science or other related field conferred no more than 4 years prior to the start date.

2. Experience in developing machine learning algorithms.
3. Coding experience in Python/C++/MATLAB.
4. Experience working both independently and collaboratively.
5. Strong communication skills as evidenced by peer-reviewed publications/conference presentations.

NOTE: To be appointed at the Postdoctoral Researcher title it is necessary to have the PhD in hand. Appointments made without a diploma or certified transcript indicating an earned doctorate are conditional hires and are appointed on an acting basis not to exceed six months. Upon verification of degree the appointment will be extended to its full duration.

PREFERRED QUALIFICATIONS:

1. Experience with deep learning applications and signal processing.
2. Familiarity with optimization methods.
3. Familiarity with high-performance computing.

APPLICATION PROCEDURE:

Apply online only at <https://employment.ku.edu/staff/23517BR>.

Upload the following information:

1. Cover letter (max 2 pages) including how you meet the required and preferred qualifications, your career goals, and why you are excited about the position.
2. Full CV.
3. Contact information for 3 references (relationship, email address and phone number).
4. College and graduate school transcripts (unofficial copies acceptable).

Review begins October 24, 2022, and will continue until a qualified pool of applicants is received. For best consideration apply by the review date above.

CONTACT INFORMATION:

For technical questions contact Dr. Dmitry Borisov, dborisov@ku.edu.

For all other questions contact Annette Delaney, 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) (<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) (<http://www.visitlawrence.com>), the [Lawrence CyberVillage](http://www.lawrenceks.org) (<http://www.ci.lawrence.ks.us>), or the [City of Lawrence](http://www.lawrenceks.org) (<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, 1246 W. Campus Road, Room 153A, Lawrence, KS, 66045, (785)864-6414, 711 TTY.