POSITION ANNOUNCEMENT

LOCATION: Kansas Geological Survey (KGS) at the University of Kansas (KU), 1930 Constant Ave, Lawrence, Kansas

POSITION TITLE: Electrical Engineer

KU TITLE: Research Engineer

APPLICATION DEADLINE: Review of applications will begin November 8, 2021, and continue until the position is filled.

TENTATIVE START DATE: December 13, 2021, exact start date is negotiable.

POSITION OVERVIEW:
Using engineering background, test, maintain, refine, design, build, and ready advanced geophysical equipment and associated components for field data acquisition. Freedom to conceive, design, and build hardware and software supporting data acquisition for a wide range of geologic applications. Provides a leadership role in training of proper use and handling of equipment. Troubleshoot electronic equipment, often in a field environment, and repair or implement replacement options.

SALARY, EMPLOYMENT STATUS, AND FRINGE BENEFITS: Full-time position with benefits, subject to a six-month probation and annual performance reviews. Salary is commensurate with qualifications and experience.

KU offers great benefits to employees with up to 22 days of paid vacation earned per year, 12 days 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. KU is a great place to work! The University actively encourages applications from members of underrepresented groups.

EXPLORATION SERVICES SECTION: The Kansas Geological Survey (KGS) Exploration Services (ES) section develops and uses several investigative methods to provide information about the subsurface, using both invasive and non-invasive approaches with a focus on higher resolution and accuracy while reducing cost.

The ES section provides drilling in support of water, energy, and basic subsurface research. It also runs a program designed to monitor changes and identify regional trends in the High Plains, Dakota, and alluvial aquifers, measuring about 1,380 wells in 47 central and western Kansas counties. As well, the ES section is responsible for installation, maintenance, and collection of data from earthquake recording stations in Kansas—both permanent stations and several temporary networks—to detect and analyze seismic activity.

For more information about the KGS visit our website: http://www.kgs.ku.edu

RESPONSIBILITIES:

20% Conceives, designs, and implements microcomputer/microcontroller systems/software as well as electronic and mechanical devices for the testing of advanced geophysical data acquisition and processing research. Help evaluate commercially available seismic instruments/components based on literature, laboratory, and field testing, fitness for KGS geophysical research, and determination of potential design flaws. Participates in development, pre-planning, and excursions as necessary to ensure electronic readiness for seismic research projects. Programming to manage data formats. Monitors and evaluates overall fitness of seismic hardware and software for rapid deployment.

10% Principle oversight and facilitator in preparing, updating, delivering, and retrieving electronic field systems for KGS and collaborators working on annual waterlevel measurement program. Programming and revising of specialized software for android devices. Options to perform as a field-member of the annual water level measurement program. Responsible for educating on the proper operation of all guidance and data logging hardware and software systems used by several state agencies. Assist in troubleshooting and resolving any issues arising from electronic systems. Responsible for preliminary analysis and safeguarding the accuracy of annual water level measurements.

10% Participate with data recording, transfer operations and data management of both temporary and permanent Kansas earthquake network. Instruct and monitor earthquake technician on proper maintenance and installation of
hardware at remote field locations. Field oversight will be necessary in cases where remote interaction is not providing the 100% operational efficiencies.

40%  Participates in research planning and development for a wide range of projects and programs using engineering background and expertise to determine optimum electronic systems and/or devices for purchase, to design, or construction, based on project goals. Projects/programs including but not limited to seismic, GPR, drilling, waterlevel, earthquake, land surveying, and logging as well as other KGS section as need for expertise arises. Responsibility for all section computers, plotters, and printers (purchasing, setup, and updates); with additional oversight of KGS cell phones.

20%  Acting as an electronics specialist, evaluate and compare, often without the aid of schematics or other published technical information, expected versus actual performance of a variety of specialized electronic and mechanical devices. Applying electronic/engineering principles in the formulation and implementation of a solution that may involve repairing, rebuilding, redesigning, or discarding the equipment. Independently investigates and determines appropriate solutions to problems with KGS electronic equipment. Troubleshoot complex electronic systems, correct system problems or recommend options. Design, build, and implement specialized electronic components for a wide range of applications.

REQUIRED QUALIFICATIONS:
1. Associates degree in electrical engineering technology with 3 years of relevant experience OR B.S. in Electrical/Computer Engineering plus 1 year of relevant experience.
2. Demonstrated experience with diagnosing/troubleshooting electronic equipment malfunctions and successful repair as evidenced by application material.
3. Developed hardware, software, and/or firmware products as evidenced by application material.

POSITION REQUIREMENTS:
1. Valid driver’s license.
2. Occasional travel around ten days at a time, averaging 25-30 days per year.
3. Work outdoors in challenging conditions for periods of several days.
4. Lift and move up to 30 pounds short distances with or without accommodation.
5. Work independently and make decisions with remote guidance.

PREFERRED QUALIFICATIONS:
2. Knowledge of DGPS/RTK systems and data protocols.
3. Experience with field based telemetered data systems.
4. Seismic acquisition systems field experience.
5. Familiarity with programming aps on android devices.

APPLICATION PROCEDURE:
Apply online only at https://employment.ku.edu/staff/20379BR. Complete the University of Kansas Unclassified Professional Staff profile and upload the required material:
1) Cover letter - address each required and preferred qualification, and each position requirement.
2) Resume.
3) Contact information for two or more work references. Provide relationship to the references.
4) Unofficial college transcripts to determine education requirement.

Review begins November 8, 2021, and will continue until a qualified pool of applicants is received. For best consideration apply by the review date.

CONTACT INFORMATION:
Annette Delaney, Human Resources, Kansas Geological Survey, University of Kansas, adelaney@ku.edu or 785-864-2152.

EO/AA Employer: https://policy.ku.edu/IOA/nondiscrimination