Position for hire : Seismologist

Overview

Just beneath our feet is enough heat energy to enable a 100% renewable electricity grid. Connecting geothermal power plants to the grid provides clean firm generating capacity that supports intermittent renewable generation and keeps levelized costs down. Geothermal energy is the heat below our feet that's stored in rock and circulated by fluids. In special geologic cases, that heat is highly concentrated at shallow depths in high enough quantities (think of the Old Faithful Geyser at Yellowstone National Park) that it can be tapped for power generation. However, most commercial-scale geothermal resources provide no visible clues at the surface of the earth, presenting the industry with one of its central challenges: resource discovery. New geoscience and data science tools are making it possible to discover and de-risk these hidden resources, making geothermal energy scalable and a vital contributor to a fully carbon-free electricity generating grid.

Zanskar Background

Zanskar is a geothermal exploration company accelerating the transition to carbon-free electricity generation by identifying and characterizing new geothermal resources. Zanskar does this by combining big data, machine learning, advanced seismic imaging and a highly cross-functional team to build a next-generation suite of tools to discover new resources and de-risk their development.

Zanskar is based in the Salt Lake City, UT metro area and is a venture-backed startup founded in 2019 by Stanford and UCSC geoscience PhDs. Zanskar provides services to and partners with independent geothermal power plant developers and operators and private equity investors to discover and improve development outcomes of geothermal resources.

Zanskar's team has decades of experience performing geologic studies in various settings, including geothermal exploration in western Alaska, California, Utah, Nevada, Oregon, New Mexico and Turkey. Zanskar is supported by Research Fellowships at the Lawrence Berkeley National Laboratory, with funding from the Department of Energy's Geothermal Technologies Office. Zanskar recently closed a Series Seed financing, led by Prime Impact Fund, with participation from 7 venture capital funds.

Position Available

Zanskar has an opportunity for a Seismologist with interests in processing, imaging, inversion and tomography using high-frequency, large-N seismic array datasets. Several large-N seismic arrays have been deployed across operating geothermal fields in recent years, allowing high-resolution, full-wavefield sampling of short and long duration (i.e., impulsive and emergent) signals sourced from complex structures and fluid-rock interactions that control geothermal resources. The Seismologist will make use of these data and modern computational methods to build 3D models and images of such environments and processes. The Seismologist will manage ongoing research collaborations and partnerships with academic and industry partners and will assist in field data

acquisition in the western USA and potentially abroad.

Position Overview

The Seismologist will participate in all aspects of seismic acquisition, processing, imaging and inversion, tomography, and archival. This could include work using and building upon tools from disparate disciplines such as earthquake, ambient noise, and exploration seismology.

Role of Seismologist

The Seismologist will work as part of a team of geologists, geophysicists, and data scientists and may manage and be supported by seismology interns.

Required and Preferred Qualifications

Candidates must hold a PhD in geophysics or a related field by the time of hire. The successful applicant should have experience with signal processing, seismic data imaging and inversion, a strong record of peer-reviewed publication or equivalent industry experience and demonstrated capability of independent research and productivity.

Ideal candidates will have the following qualifications:

- Required: PhD in geophysics or equivalent at time of appointment.
- Required: Strong seismology background and fluency in first principles fundamentals.
- Required: Experience in one or more of the following disciplines: exploration seismology (e.g., reflection), earthquake seismology (e.g., earthquake detection, association and location) and/or ambient noise seismology (e.g,. interferometry and tomography).
- Required: Strong ability to program using python, Matlab and unix shell scripting.
- Required: Fluent in English and excellent oral and written communication skills.
- Required: Creative and able to work and communicate in a team environment.
- Preferred: Post-doc and/or industry experience.

Location

We'd love to have you based in Utah with the rest of us, but this role is open to remote candidates with required periodic travel to our headquarters in Utah.

How to apply

Please submit a brief cover letter and CV/resume to joel@zanskar.us.

More About Us

Zanskar is an equal opportunity employer and complies with all applicable federal, state, and local fair employment practices laws. Zanskar strictly prohibits and does not tolerate discrimination against applicants because of race, color, religion, creed, national origin or ancestry, ethnicity, sex, pregnancy, gender (including gender nonconformity and status as a transgender individual), age, physical or mental disability, citizenship, past, current, or prospective service in the uniformed services, or any other characteristic protected under applicable federal, state, or local law