

**Opportunity Title:** Soil Data Science and Statistics Research

**Opportunity Reference Code:** ERDC-EL-2020-0004

**Organization** U.S. Department of Defense (DOD)

**Reference Code** ERDC-EL-2020-0004

**How to Apply** Components of the online application are as follows:

- Profile Information
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - [Click here for detailed information about acceptable transcripts](#)
- References

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system.

If you have questions, send an email to [usace@orise.orau.gov](mailto:usace@orise.orau.gov) list the reference code of this opportunity in the subject line of the email.

All documents must be in English or include an official English translation.

**Description** The Environmental Laboratory (EL) is one of the seven laboratories of U.S. Army Engineer Research and Development Center (USACE-ERDC), which is the Army Corps of Engineers' integrated research and development (R&D) organization. EL provides solutions to environmental challenges for the U.S. Army, the Department of Defense and the Nation through environmental science and engineering research and development. Researchers in EL conduct research in ecosystem science and technology, environmental resiliency, environmental sensing, ecological modeling and forecasting, risk and decision science, environmentally sustainable material, systems biology, climate change, computational chemistry, environmental chemistry and environmental security. For more information about the US Army Engineering Research and Development Center (ERDC) Environmental Laboratory (EL), please visit <https://www.erdcl.usace.army.mil/>.

A post-doctoral opportunity is currently available in geosciences working with the US Army Engineer Research and Development Center, Environmental Laboratory, Soil & Sediment Geochemistry Team.

The participant will gain experience in a variety of environmental research activities including, but not limited to, environmental field sampling, chemical, mineralogical, and physical characterizations of soil and water, fate and transport of newly emerging organic and inorganic contaminants of concern, proximal soil sensing, geostatistics, geoforensics, and data input and analytics. You will receive mentoring from federal research scientists and assist in meeting research obligations with the opportunity to generate research proposals, publications, and/or technical reports. Some travel for



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research expeditions and/or meetings and conferences is likely. The ideal candidate will have a strong publication record, demonstrate an ability to work in an interdisciplinary team environment, and have a working knowledge of the USDA NRCS Soil Taxonomy classification system. Additionally, a background in geospatial/multivariate statistical methods is desirable. Position is for one year and extendable up to 3 years dependent on availability of funding.

You will have the opportunity to lead aspects of one or more of the following projects: (1) Identifying and quantifying changes in geochemical properties, and corresponding vis-NIR and mid-IR spectroscopic responses based on soil pedomorphological type, (2) utilizing a multidisciplinary approach (geochemical, geospatial, microbial, soil morphology, chemometrics, pedometrics) and cutting-edge data analytics to develop theoretical and empirical approaches for describing soil processes, and (3) parameterizing the environmental fate and transport of newly developed munitions in soil.

#### **Appointment Length**

This ORISE appointment period is up to twelve months in length.

Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

#### **Participant Benefits**

Participants will receive a stipend to be determined by ERDC-EL. Stipends are typically based on the participant's academic standing, discipline, experience, and research facility location. Other benefits may include the following:

- Health Insurance Supplement. *Participants are eligible to purchase health insurance through ORISE.*
- Relocation Allowance
- Training and Travel Allowance

#### **Nature of Appointment**

The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOD, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.



While participants will not enter into an employment relationship with DOD or any other agency, this opportunity may require a suitability investigation/background investigation. Any offer made is considered tentative pending favorable outcome of the investigation.

**Qualifications** PhD in Soil Chemistry, Soil Science, Geochemistry, Geostatistics, Environmental Science, or related fields. Strong organizational and interpersonal skills.

**Eligibility** • **Citizenship:** U.S. Citizen Only

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- Requirements**
- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#) )
    - **Communications and Graphics Design** ([1](#) )
    - **Computer, Information, and Data Sciences** ([16](#) )
    - **Earth and Geosciences** ([21](#) )
    - **Engineering** ([27](#) )
    - **Environmental and Marine Sciences** ([14](#) )
    - **Life Health and Medical Sciences** ([45](#) )
    - **Mathematics and Statistics** ([10](#) )
    - **Other Non-Science & Engineering** ([2](#) )
    - **Physics** ([16](#) )
    - **Science & Engineering-related** ([1](#) )
    - **Social and Behavioral Sciences** ([27](#) )
  - **Age:** Must be 18 years of age