

Opportunity Title: Computational Chemistry Postdoctoral Researcher

Opportunity Reference Code: ERDC-EL-2019-0006

Organization U.S. Department of Defense (DOD)

Reference Code ERDC-EL-2019-0006

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 (blacked 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 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/>.

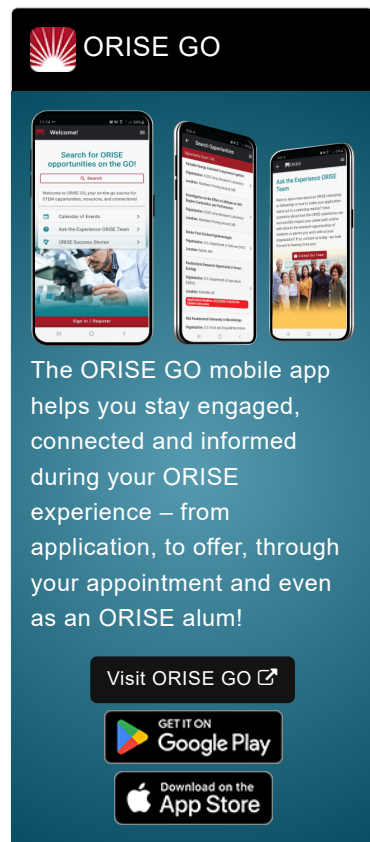
The participant will assist the mentor in research performing computational chemistry and molecular dynamics simulations on adsorption and interaction on simple and complexes surfaces. The participant will assist in developing models for components of soil surfaces, study adsorption of different organic and inorganic compounds/complexes. They will also acquire knowledge in computing thermodynamic properties and binding energies and help develop approaches to efficiently compute vibrational frequencies for large systems. Under the guidance of a mentor, the candidate will actively participate in preparation of research results to be presented to the broader ERDC community. The assistance received will assist in publications to inform the broader scientific community through peer-reviewed journals and developing project ideas.

Appointment Length

This ORISE appointment period is 12 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




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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 Candidate with a PhD degree or graduating soon in computational chemistry and MD simulations research on adsorption and interaction of molecules on simple and complex surfaces.

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) )
 - **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](#) )
 - **Physics** ([16](#) )
 - **Age:** Must be 18 years of age