Opportunity Title: USFS Postdoctoral Fellowship for Investigating Root Zone Controls on Watershed Response to Drought
Opportunity Reference Code: USDA-USFS-2023-0307

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-USFS-2023-0307

How to Apply ***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

A complete application package consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate must provide proof of completion of the degree before the appointment can start. Click **Here** for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations.

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

Application Deadline 8/18/2023 3:00:00 PM Eastern Time Zone

Description ***Applications will be reviewed on a rolling-basis.**

USFS Office/Lab and Location: A postdoctoral research fellowship is available at the US Department of Agriculture (USDA) Forest Service (USFS), Pacific Southwest Research Station to collaborate with partners at the University of Texas at Austin and Simon Fraser University. The appointment is in Davis, California, and there is an opportunity to participate remotely. The fellowship will begin in Summer 2023 with a flexible weekly schedule and will continue through September 2024 with the potential for an extension contingent on funding.

At the heart of the U.S. Forest Service's mission is their purpose. Everything they do is intended to help sustain forests and grasslands for present and future generations. Why? Because their stewardship work supports nature in sustaining life. This is the purpose that drives the agency's mission and motivates their work across the agency. It's been there from the agency's very beginning, and it still drives them. To advance the mission and serve their purpose, the U.S. Forest Service balances the short and long-term needs of people and nature by: working in collaboration with communities and our partners; providing access to resources and experiences that promote economic, ecological, and social vitality; connecting people to the land and one another; and delivering world-class science, technology and land management.

Research Project: We are seeking a qualified candidate to collaborate with the USDA Forest Service and partners to investigate subsurface drivers of watershed response to drought. We seek a fellow with interests in coupling observational insights from intensively monitored study catchments with remote sensing, hydrological modeling, and/or machine learning methods to upscale process understanding to large watersheds. Diverse backgrounds will be considered, but candidates with Python

programming, remote sensing, hydrological modeling, and/or machine learning experience will be given preference. For additional topical context, interested candidates can review recently published manuscripts from this funded project:

https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2022GL100505

https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2021WR031781

https://www.nature.com/articles/s41586-021-03761-3

Learning Objectives: As a result of this appointment, the participant will improve their skills in physical and theoretical hydrology, field data collection, analysis of remote sensing data, and data processing and analysis for Earth systems data.

Mentor: The mentor for this opportunity is David Dralle (david.dralle@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: August 1, 2023. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for fourteen months but may be extended upon recommendation of USFS and is contingent on the availability of funds.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The current stipend for this opportunity is $5,500 to $6,500 per month.**

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the Guidelines for Non-U.S. Citizens Details page of the program website for information about the valid immigration statuses that are acceptable for program participation.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and USFS. Participants do not become employees of USDA, USFS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: Please visit our Program Website. After reading, if you have additional questions about the application process please email USForestService@orise.orau.gov and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a doctoral degree in one of

the relevant fields or be currently pursuing the degree with completion before the appointment start date.

Preferred Skills:

- Demonstrated technical writing and communication skills
- Python coding
- GIS

Eligibility Requirements

- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Physics** (16 👁)