

**Opportunity Title:** USDA Forest Service Fellowship in Ecosystem Hydrological Modeling

**Opportunity Reference Code:** USDA-USFS-2022-0368

**Organization** U.S. Department of Agriculture (USDA)

**Reference Code** USDA-USFS-2022-0368

**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. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations. Applications need at least one recommendation submitted in order to be viewed by the mentor.

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

**Application Deadline** 4/1/2023 3:00:00 PM Eastern Time Zone

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

**USFS Office/Lab and Location:** A postdoctoral research opportunity is available with US Forest Service (USFS), Eastern Forest Environmental Threat Assessment Center located in Research Triangle Park, North Carolina.

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:** Forest lands are 'water towers' in the United States that provide critical ecosystem services (e.g., clean water supply, climate moderation, timber production, carbon



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sequestration, recreation) indispensable to the regional economy and the wellbeing of more than 150 million people. However, these forest benefits are increasingly threatened by environmental change by fundamentally altering the ecohydrological process such as evapotranspiration, either directly (i.e., water and energy availability) or indirectly (i.e., land surface properties). Solving emerging watershed problems caused by drought, fire, land conversion, and climate change all requires quantitative knowledge of ecohydrological processes and advanced modeling tools.

Under the guidance of a mentor, the participant will conduct hydrological modeling research on the interactions of forests and water by analyzing a large watershed hydrological database built through collaborating with researchers in the US and globally.

**Learning Objectives:** The participant will have the opportunity to learn advanced techniques of hydrological modeling and gain field experiences of measuring ecohydrology at multiple scales.

**Mentor:** The mentor(s) for this opportunity is Ge Sun ([ge.sun@usda.gov](mailto:ge.sun@usda.gov)). If you have questions about the nature of the research, please contact the mentor(s).

**Anticipated Appointment Start Date:** **December 1, 2022.** Start date is flexible and negotiable, and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for one year 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.

**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.

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**Questions:** Please visit our [Program Website](#). After reading, if you have additional questions about the application process, please email [USForestService@orise.orau.gov](mailto: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.

**Eligibility Requirements**

- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Earth and Geosciences** (3 👁)
  - **Environmental and Marine Sciences** (3 👁)