

Opportunity Title: USFS Postdoctoral Fellowship in Forest Genetics

Opportunity Reference Code: USDA-USFS-2021-0044

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-USFS-2021-0044

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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. All transcripts must be in English or include an official English translation. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations

If you have questions, send an email to USForestService@orise.orau.gov. Please include the reference code for this opportunity in your email.

Application Deadline 3/31/2021 3:00:00 PM Eastern Time Zone

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

A research opportunity is currently available at the U.S. Department of Agriculture (USDA), U.S. Forest Service (USFS) at the Southern Research Station (SRS) located in Saucier, Mississippi or Lexington, Kentucky.

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.

The USDA Forest Service's Southern Research (SRS) seeks a postdoctoral fellow with knowledge and experience in forest genetics and silviculture for an exciting project to help in the conservation and restoration of shortleaf pine (*Pinus echinata*). The participant will be involved with a team of collaborating researchers using a range of resources to evaluate elements of shortleaf pine genetic diversity in the eastern and western portions of the species' native range. Research may involve up to four elements: (1) DNA marker analysis to evaluate the genetic integrity of shortleaf pine, with particular emphasis on detecting/quantifying shortleaf-loblolly pine (*P. taeda*) hybrids; (2) re-measurement and data analysis of shortleaf pine progeny tests established on national forests in the 1980s, (3) adapting the information gathered in this work to update shortleaf pine seed zones, and (4) establishing a new series of common garden studies intended to sample the genetic and environmental ranges of shortleaf pine.

Learning objectives:



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- understand, analyze and describe how DNA markers can be used to establish species identity and estimate hybridization levels
- understand, analyze and describe how seed zone determination and seed source characterization can be used for climate change mitigation
- understand, analyze and describe how tree improvement can be used to enhance species restoration efforts
- understand, design and implement common garden experiments

Anticipated Appointment Start Date: April 2021; start date is flexible

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. The initial appointment is for one year, but may be renewed upon recommendation of USFS and is contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at USFS in the Saucier, Mississippi or Lexington, Kentucky, area. Participants do not become employees of USDA, USFS, DOE or the program administrator, and there are no employment-related benefits.

This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) only.





For more information about the USFS Research Participation Program, please visit the [Program Website](#).

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields, or be in the last term of doctoral studies. Degree must have been received within three years of the appointment start date.

Preferred skills:

- Academic training in areas such as tree genetics, quantitative silviculture, restoration ecology, and/or modeling at the PhD level
- Good quantitative analysis skills, particularly in the context of forest genetics and tree improvement
- Interest in participating in interdisciplinary, team-oriented research projects to help forest managers restore a key species
- Record of publishing in peer-reviewed journals

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree received within the last 36 months or anticipated to be received by 4/1/2021 11:59:00 PM.
- **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([1](#) )
 - **Environmental and Marine Sciences** ([5](#) )
 - **Life Health and Medical Sciences** ([6](#) )
 - **Mathematics and Statistics** ([1](#) )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).