Opportunity Title: USFS Postdoctoral Fellowship in Forest Operations
Opportunity Reference Code: USDA-USFS-2021-0149

Organization	U.S. Department of Agriculture (USDA)
Reference Code	USDA-USFS-2021-0149
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. 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. 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.
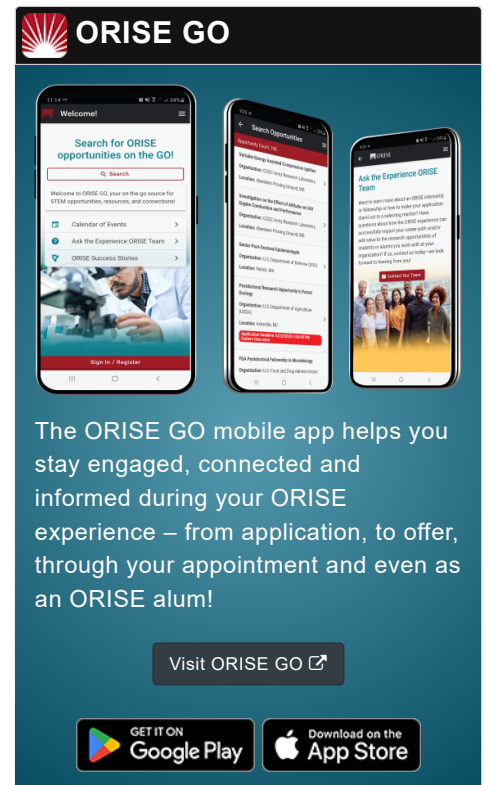
Application Deadline	10/31/2021 3:00:00 PM Eastern Time Zone
Description	*Applications will be reviewed on a rolling-basis.*

USFS Office/Lab and Location: A research opportunity is available with the US Forest Service (USFS), Southern Research Station, Forest Operation Research Unit located in Auburn, Alabama. Scientists in the Operations Unit and the closely aligned Utilization of Southern Forest Resources Research Unit engage in research with a broad objective of supporting the sustainable and efficient harvesting and utilization of the region's forest products.

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: Harvesting systems, primarily full tree

systems, in the southern US have developed to work efficiently in managed pine forests. Other mechanized systems, particularly cut-to-length (CTL) have been marginalized, due to both real and perceived barriers. The objective of this project is to develop an understanding of the potential role of CTL by integrating information about the resource, the markets and the people. Specific objectives may include 1) review and develop robust production and costing models comparing stump to truck and stump to product costs and estimate product net revenues, 2) assess wood basket market opportunities for random length and log length timber, 3) assess land ownership characteristics which may be important to CTL adoption, 3) explore strategic benefits for CTL in the context of the changing logging workforce (self-employment, employment, firm size, capacity and payroll), transportation constraints, operator concerns (safety, comfort, and job quality) and availability of data generated by CTL systems. The participant will interact in a team environment with research collaborators and will communicate with forest operations professionals, other research scientists, national forest system staff, state foresters in the region, loggers, and forest equipment manufacturers. The emphasis of the project will be to develop quantitative tools for evaluation of harvest systems and the supply chain at the firm and wood-basket level.

Learning Objectives:

- Gain first-hand experience conducting cutting-edge research within a federal agency
- Develop skill in interacting with agency partners to develop applied science to meet complex forest management, harvesting, and utilization demands
- Develop analytical skills analyzing forest products supply chains and developing analytical models
- Develop science writing and communication skills, as well as project development, leadership, and management skills

Mentor(s): The mentor for this opportunity is Mathew Smidt (Mathew.smidt@usda.gov). If you have questions about the nature of the research please contact the mentors.

Anticipated Appointment Start Date: As soon as candidate is availalbe. 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.

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 by December 31, 2021. Degree must have been received within the past five years. Preferred skills: • Experience in forest operations analysis, forest resource management, spatial data science, supply chain/logistics analytics, machine learning • Excellent analytical/statistical skills • Experience with statistical analysis software (e.g. R, SAS), GIS software (e.g., ArcGIS, QGis), and programming languages (e.g., R, Python, C++). • Excellent organizational, communication, and scientific writing skills • Ability to conduct research in an interactive team environment as well as independently

Eligibility Requirements	• **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 12/31/2021 11:59:00 PM.
	• **Discipline(s):**
	  ○ **Business** (1 👁)
	  ○ **Computer, Information, and Data Sciences** (17 👁)
	  ○ **Earth and Geosciences** (21 👁)
	  ○ **Engineering** (27 👁)
	  ○ **Environmental and Marine Sciences** (14 👁)
	  ○ **Life Health and Medical Sciences** (46 👁)
	  ○ **Mathematics and Statistics** (10 👁)
	  ○ **Social and Behavioral Sciences** (2 👁)
	• **Veteran Status:** Veterans Preference, degree received

within the last 120 month(s).