

**Title:** Postdoctoral Research Associate, Using Satellite Data to Improve Smoke Forecasting Tools for Wildfire Incidents, Full Time, 100% FTE  
**Location:** Seattle, WA  
**Duration:** Initial appointment is for one year and renewable up to three years depending on performance; beginning as early as March 1, 2017  
**Salary:** Commensurate with experience

## **Position Description**

We are seeking a remote sensing postdoc to lead the improvement of smoke forecasting tools that support wildfire incidents throughout the United States. The Postdoc will lead an effort to mine, analyze, synthesize, and deliver remotely sensed earth observations in various formats to personnel deployed to wildland fire incidents, health and air quality agencies, and the public.

The position is with the University of Washington (UW), School of Environmental and Forest Sciences supporting research collaborations with the US Forest Service (USFS). The project leads are Ernesto Alvarado (UW), Susan O'Neill (USFS), and Sim Larkin (USFS / UW).

Work includes:

- Identifying gaps in the current use of satellite data for wildland fire incidents.
- Formulating strategies for additional use of satellite data for these incidents.
- Integrating satellite data into the BlueSky smoke modeling framework, particularly to improve emissions, plume rise, and model output evaluation.
- Identifying future opportunities as new satellite systems launch and data come online.

The work will be conducted as part of multidisciplinary team, integrating data from many sources and disciplines such as fire ecology, atmospheric chemistry, fire weather, fire behavior and combustion, and field campaigns of land and airborne measurements. The basic existing modeling system is the BlueSky smoke modeling framework, which links together fire activity, mapped fuel loadings, fuel consumption and emission models, and algorithms for fire spread and vertical allocation emissions into dispersion and atmospheric chemistry models to produce smoke forecasts. The successful candidate will serve as the resident satellite data expert regarding how remotely sensed data can be used in our existing systems, help develop new innovative uses/applications, and facilitate delivery of remotely sensed data to our users and customers.

The position will provide an outstanding opportunity to apply a variety of field and analytical skills to perform original and applied research, present the results at scientific meetings and trainings, and publish first-author papers in peer-reviewed journals. The appointment is for one year renewable up to three years. The salary is negotiable depending upon experience and includes benefits. The initial appointment will be for 1yr,

with the 2nd year conditional on performance. The position is located at the Pacific Wildland Fire Sciences Laboratory in Seattle, Washington, USA.

Qualifications:

- Ph.D. using remote sensing in atmospheric science, engineering, or similar field
- Knowledge of available remotely sensed products, experience manipulating the data, and benefits/drawbacks of different approaches and algorithms.
- Strong quantitative skills and familiarity with statistical techniques used in remote sensing and atmospheric sciences.
- Experience with manipulating and analyzing large spatial datasets
- High-level R and/or Python programming skills
- Comfort in working in UNIX/LINUX environment
- Data and workflow management skills
- Strong writing and presentation skills, including a track record of peer-reviewed publications and scientific conference presentations
- Ability to work in a collaborative environment across many disciplines

**Application Instructions:**

For information about the position, contact Dr. Susan O'Neill, [smoneill@fs.fed.us](mailto:smoneill@fs.fed.us), [susan.m.oneill@gmail.com](mailto:susan.m.oneill@gmail.com), 206-732-7851

Interested individuals should send a CV, brief statement of qualifications, and contact information for 3 references to:

Dr. Ernesto Alvarado  
School of Environmental and Forest Sciences  
University of Washington  
Box 352100  
Seattle, WA 98195  
Email: [alvarado@uw.edu](mailto:alvarado@uw.edu)  
Phone: 206-616-6920

Review of applications will begin on February 1, 2016 and continue until the position is filled.

The incumbent will have opportunities for professional development through the University of Washington Office of Postdoctoral Affairs (<https://grad.uw.edu/for-students-and-post-docs/post-doctoral-affairs/>).

The University of Washington is an affirmative action and equal opportunity employer. All qualified applicants will receive consideration for employment without regard to, among other things, race, religion, color, national origin, sex, age, status as protected veterans, or status as qualified individuals with disabilities. University of Washington faculty engage in teaching, research, and service.