

## **#1. Postdoctoral Research Scientist: Socio-ecological consequences of snow and ice-scape dynamics in the Arctic**

Job Description: The Boelman Lab, focused on Arctic Ecology, at Lamont-Doherty Earth Observatory of Columbia University seeks a Postdoctoral Research Scientist to participate in the following research project:

A collaborative NASA-funded project that will quantify the socio-ecological consequences of changing snow- and ice-scapes across much of Alaska and northwestern Canada. This project is part of the Arctic-Boreal Vulnerability Experiment (ABOVE) and is in collaboration with the Liston Lab (Hydrology and Atmospheric Science) at Colorado State University, the Prugh Lab (Wildlife Ecology) at the University of Washington, and the Brinkman Lab (Human Dimensions of Wildlife) at the University of Alaska Fairbanks.

We will quantify past, present-day, and future spatiotemporal dynamics of snow- and ice-scapes throughout the ABOVE Study Domain via a data-model fusion approach and future climate scenarios. This will provide a suite of cold-season environmental variables that we will then modify to create Societally-Relevant Environmental Variables (S-REVs) used to quantitatively evaluate recent and projected changes to natural resources and subsistence opportunities (i.e. related to moose surveys and hunting), winter transportation networks (i.e. related to trafficability and safety), and carbon cycling. The Postdoc will work with the Liston Lab to develop S-REVs relevant to winter travel conditions, as well as with the Brinkman Lab and previously identified winter road engineers/operators and to quantify relationships between S-REVs and trafficability and safety along winter travel networks. There may also be opportunities to combine questions and datasets from this project with those from other NASA and NSF-funded projects both within and outside the Boelman Lab. Applicants with experience in large spatial analyses are encouraged to apply. Direct

Link: <http://pa334.peopleadmin.com/hr/postings/3914>

## **#2. Postdoctoral Research Scientist: Determining drivers of dynamics in avian migratory behavior via soundscape ecology and environmental modeling**

Job Description: The Boelman Lab, focused on Arctic Ecology, at Lamont-Doherty Earth Observatory of Columbia University seeks a Postdoctoral Research Scientist to participate in the following research project:

A collaborative NSF-funded project using soundscape ecology to assess environmental and anthropogenic controls on wildlife behavior. This project is in collaboration with the Mandel Lab (Computer and Information Science) at CUNY Brooklyn, the Brinkman Lab (Human Dimensions of Wildlife) at the University of Alaska Fairbanks, and the Liston Lab (Hydrology and Atmospheric Science) at Colorado State University.

The overall goal of the project is to understand the influence of both environmental dynamics and increasing anthropogenic activity on the behavior and phenology of migratory caribou, waterfowl, and songbird communities in Arctic-boreal Alaska and northwestern Canada. The Postdoc will focus on exploring multi-scale drivers of spatial and temporal dynamics in avian migration timing (spring and fall) and pan-breeding season habitat use. This will entail working to mesh and co-analyze the avian acoustic metrics produced by the Mandel Lab, environmental data generated by the Liston Lab, and datasets on a suite of habitat characteristics and disturbance recovery from remote

sensing and field observations. Applicants with experience in spatial ecology and strong analytical skills are encouraged to apply. Direct Link: <http://pa334.peopleadmin.com/hr/postings/3911>

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