

# The Ohio State University

## Department of Geography

### Post Doctoral Presentations

## **Assessing the spatial heterogeneous variation in the use, management and plans for the forests in Appalachian Ohio**

**Derek Van Berkel**

This talk will present the findings of a large scale resident survey administered in Hocking, and Athens Ohio counties. The survey inquired about current uses of the forest, past and potential management, as well as, information about the residents themselves in an attempt to characterize the land management of these regions. Results of the survey responses will be discussed in the context of observed forest changes and land transactions over the last 60 years. We will also address challenges of collecting data in this region of Ohio related to response bias. Of the 4000 surveys sent out, approximately 550 were returned, which represents a low response rate. Finally I will outline how these results will be used in an agent-based model that simulates possible forest change, land parcel shifts and resident population dynamics.

## **Modeling forest responses to climatic variations in Appalachian region**

**Hongshuo Wang**

In this presentation I report the preliminary findings of two studies examining ecological responses to regional climatic variations. Firstly, we examine how tree species distribution in Appalachian region is influenced by regional climatic variations. Based on statistical and ecological analysis the important climatic factors which limit tree species distribution are identified. Our study shows that statistical models using pseudo-absence and occurrences data help to define the ecological amplitudes for tree species distribution. The second study examines vegetative drought in the Appalachian region. We used the climatic grid and remotely sensed vegetation growth parameters to quantify the spatiotemporal forest responses to drought. The research is meaningful for forest conservation and may contribute to our understanding on forest disturbances from climatic changes.

**Friday, November 22, 2013**

**3:30 - 5:00 pm**

**Room 1080 Derby Hall**



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