



# Environmental Science Graduate Program Seminar Series

## Aerial Data Fusion Above Arctic-Boreal Landscapes

**James Cross**

**September 24<sup>th</sup>, 2021 | 2:00-3:00 PM**

**Smith Laboratory, Room 3150**



### Abstract

The effects of climate change have become increasingly severe in the past thirty years and will continue to worsen over the coming decades. The arctic-boreal regions throughout northwestern Canada and Alaska are expected to warm and twice the global average, drastically altering the extent of permafrost and cycles of carbon sequestration. In 2008 NASA initiated the Arctic-Boreal Vulnerability Experiment (ABOVE) to develop a better understanding of this critical region in the face of climate change. In this research we explore the synergies of two airborne instruments utilized during the mission; the Airborne Visible-Infrared Spectrometer (AVIRIS-NG) and the Land, Vegetation, and Ice Sensor (LVIS); to improve our ability to characterize vegetation in this traditionally difficult landscape. The Scotty Creek Research Station located in Northwest Territories, Canada is used as our study site.