

AKSHAY MEHRA – PRINCETON UNIVERSITY

STATEMENT OF PURPOSE:

The rock record can tell scientists a great deal about how locations on Earth responded to events such as climate change and/or sea level rise. At the same time, a better understanding of the scale, rate, and duration of environmental change can be gained by studying modern depositional environments. This work seeks to inform the present and future from the past while providing additional context for environmental indicators that are preserved in stratigraphy. The datasets - high resolution drone-derived imagery and elevation information combined with detailed field observations - provide novel ways to study both modern depositional environments and ancient outcrops. The three-dimensional, geolocated nature of the digital data allows scientists to visualize, measure, and study locales in an interactive manner on their local computers.

DESCRIPTION OF DATA SETS:

In this presentation, I have used a collection of drone-derived orthophotos, digital surface models, and point clouds in conjunction with field observations consisting of images, environmental data (i.e, tide height, water chemistry, and elevation measurements). These data were collected by me and are part of my phd coursework and research. This presentation also includes remote sensing data from Landsat and HiRISE. Both Landsat and HiRISE data can be freely distributed with appropriate attributions.