

## **Utilizing Terrestrial Photogrammetry to Model Landslide Features**

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Landslides represent one of the few natural disasters that trouble the Southwestern region of Pennsylvania. While they may not be as big as the landslides on the West coast that can take out entire mountain sides, they can still be detrimental when located near the local infrastructure. To help understand these events, a precise way to model them is needed. Terrestrial photogrammetry has the potential to do just that. Photogrammetry is a remote sensing technique that stitches together a collection of overlapping images to create a 3D model of the photographed area. These models can be very precise and have the potential to provide critical information about the characteristics at sites that are landslide prone. Successive models made at a same site but at different dates allows for the tracking of changes in surface movements, therefore potentially indicating when a site is more at risk. Terrestrial photogrammetry provides a new means to cost-effectively model these landscapes. Using one's smart phone device, multiple overlapping photographs can be stitched together to create an accurate representation of the landslide. With GPS technology, these models can be accurately located in real space, and successive models can indicate movements to target, or even the volumetric change in the landscape. This presentation will highlight the steps taken to model a landslide site using terrestrial photogrammetry.