

## Department of Physics and IEEE NBC subsection

# Light Detection and Ranging (LIDAR) at UNBC

**Speaker: Rob Vogt**

### Abstract:

Light Detection and Ranging (LiDAR) measures the time-of-flight for reflection of visible or near-visible wavelength laser pulses to create high-resolution 3D models of Earth surfaces. This talk aims to discuss the underlying principles of LiDAR and showcase the spectrum of products it provides to research teams at UNBC.

A LiDAR scanner consists of a laser emitter and a detector. Each laser pulse yields one or more discrete points in 3D space. From the resulting point cloud, a variety of models can be generated including: surface, bare earth, and canopy height. Repeat scans at a later date allow for detection of change in terrain (eg. glacier change or landslides).

LiDAR has many research applications from archaeology to forestry to glaciology. While our research group's main focus is monitoring glacier change, we have collaborated with a number of research groups to fly a variety of study areas.

### + Date

Monday  
February 15, 2016

### + Time

2:30 – 3:30 P.M.

### + Location

Library Building  
5-174

### + Contact

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**Everyone welcome**  
**Light refreshments served**