



THE ASSOCIATION OF GEOHAZARD PROFESSIONALS

WEBINAR: MAPPING AND MONITORING GEOHAZARDS WITH 3D REMOTE SENSING

INSTRUCTOR: Matt Lato,
Ph.D. Eng., P.Eng.

3 April 2018 | 2:00 – 3:00 PM EDT

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Engineers and geoscientists engaged in applied earth science projects commonly face significant challenges in their attempts to observe, interpret, and understand the physical environment; particularly as it applies to differential change over time. Critical changes can be the displacement of a highway crossing a landslide, a pipeline crossing under a meandering river with shifting sediments, eroding shorelines, or glacier advancement and ablation. Traditional methods of identifying and mapping deformation on geotechnical engineering projects are limited to point-based systems that require significant time, effort & cost to establish, monitor and interpret. Such systems involve sparsely populated nodes that cannot be used to understand the 3-dimensional (3D) mechanics of large-scale movement, nor can they be used across spatially extensive regions to map change over long periods of time with unknown rates of movement.

Practitioners have recently begun to adopt 3D data collection technologies and processing methods to map and monitor geohazards. However, a communication gap is arising between the results to be expected at one site versus a different site when using a given technique, and what technique(s) to use in a particular environment. Determining which tool, or combination of tools, will provide the best solution for a particular project requires in-depth knowledge and understanding of data collection, processing, and interpretation techniques.

This webinar will focus on tools and techniques being exploited by geohazard professionals to develop high resolution and high accuracy 3D topography models. Background information and multiple case studies will be presented.

INSTRUCTOR: Matt Lato, Ph.D. Eng., P.Eng.
Senior Engineer, BGC Engineering Inc.

Matt is a Senior Engineer at BGC and an Adjunct Professor at Queen’s University in the Department of Geological Sciences and Geological Engineering. His primary area of interest is the application and visualization of 3-dimensional remote sensing data in solving complex earth science problems. Matt has worked on mining, pipeline, and transportation projects in North and South America, Europe and Australia. Matt is the lead author of the Site Investigation, Analysis, Monitoring and Treatment chapter of the Canadian Technical Guidelines and Best Practices related to Landslides and the recipient of the 2018 Canadian Geotechnical Colloquium Award. Matt joined BGC in 2014. He is based in Ottawa, Ontario.

Presented by The Association of Geohazard Professionals (AGHP), a non-profit organization created in 2013 to support the development of standards, specifications, and best practices concerning the design and implementation of geohazard-related technologies and products and to provide education to the geohazard community and those it serves.



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