DIPARTIMENTO DI SCIENZE DELLA TERRA
Sapienza, Università di Roma

PIAZZALE
A. MORO, 5
ROMA

Mercoledì 8 maggio 2019, ore 9:00 – Aula Lucchesi

EVALUATING ROCK SLOPE HAZARDS FOR LINEAR INFRASTRUCTURE USING LIDAR AND PHOTOGRAMMETRY

Case histories from the Canadian Railway Ground Hazard Research Program

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The rail lines in western Canada are exposed to multiple hazards including rock slope instability. Although warning systems are present along most of the track, and protection systems are in place in some of the most active areas, the natural slopes are often many 100's of m's high and produce rockfalls from multiple locations. Data to build LiDAR, photogrammetry and Gigapan models have been acquired every few months at a number of study sites, and are providing interesting data regarding rock slope activity based on back analysis of change, are focussing our ability to assess failures before they occur, and in some cases we can forecast impending failure.

In this lecture, the lessons learned from the survey design and from the study sites in different geological settings, will be discussed in the context of managing the rockfall hazard. Future plans for integrating other data sets and moving towards a more continuous data set will be discussed.

The overall RGHRP project is based on a collaboration between Queen's University, the University of Alberta, CN Rail and Canadian Pacific, with support from Transport Canada and the Geological Survey of Canada.