

# Engineering Geology for an Uncertain Future

**When:**

Oct 04, 2023 @ 17:15

**Where:**

ETH Zürich

Rämistrasse 101

Hauptgebäude

F 30 (Auditorium Maximum)

Online: <http://bit.ly/audimax-stream>

**Who:**

Prof. Dr. Jordan Aaron

**Abstract:**

The recent evacuation caused by the Brienz/Brinzauls landslide has demonstrated the importance of effective management of engineering geology systems. Our ability to predict the behaviour of these systems is currently limited by the difficulty of collecting direct observations, combined with substantial complications in developing tools to interpret these observations. In this talk I will describe how these challenges can be overcome by combining powerful new technological breakthroughs, such as high frequency laser scanning, with fundamental process understanding. I will focus on landslide hazard management, and show how glacier retreat can destabilize rock slopes, explain what lunar landslides can tell us about catastrophic landslides on earth, and demonstrate how autonomous driving technology can be used to generate a step change in our understanding of landslide motion. I will conclude with a vision for how earth science knowledge and technological advancement can be combined to face future engineering geology challenges.



Figure 1: Image of the tragic Frank Slide, Alberta, Canada.