Slope Stability Analysis Based on Random Finite Element Method and Probabilistic Approach

by Wang Xu

In order to evaluate the potential of region landslide hazard within any scale of area, it is becoming more and essential for geoengineers to find out an efficient way to estimate the stabilities of slopes with the help of digital elevation model. As preliminary study, this dissertation focuses on seeking out the inherent relationship between the failure probability and four other important parameters. Random finite element method and probabilistic approach are employed to evaluate the slope stability. Mathematical functions are then given to directly link the failure probability with each of the four parameters. In the end, a plenty of knowledge and experience are accumulated for the further investigation.

What: Final Presentation
When: 22nd Nov, 15:00-16:00
Where: Room 2.98
Committee Members:
Prof. Gordon A. Fenton
Prof. Michael A. Hicks
Dr. Ronald B.J. Brinkgreve
Dr. Phil J. Vardon