

ANNOUNCEMENT MASTER THESIS

Lhoist in cooperation with the Chair of Mining Engineering and Mineral Economics is announcing a master thesis as part of a geotechnical / mining engineering degree.

Critical review of numerical modelling techniques for slope stability with an emphasis on the determination of input parameters

Aim of the thesis

The objective of the thesis is to review numerical modelling techniques used for overall slope stability analysis in open pit mining and to evaluate them in respect to the possibilities and limitations of application, their current spread of application and in particular their required input parameters and the determination of these parameters in practice.

Description

Numerical modelling is utilized to determine overall (final) pit slope angles. Different modelling techniques (e.g. finite-elements, finite-difference or discrete-elements) can be applied. Each of these methods offers advantages and disadvantages in its application. Furthermore, the reliable determination of input parameters is challenging. Hence, complex modelling techniques could be difficult to use in practice due to the large number of input parameters required. Lhoist is interested in a critical review of the current state-of-the-art of numerical modelling techniques for slope stability analysis as well as in an outlook of future development and opportunities in this field.

Requirements

A student of a geotechnical engineering or mining engineering degree with an interest in mining rock mechanics.

Timing

Flexible; soon start preferred.

Location

Any Lhoist office in Europe (preferably Flandersbach Germany)

Contact

Thomas Frühwirt: thomas.fruehwirt@unileoben.ac.at