



WEBINAR

Introducing the state-of-the-art search method in 3D Slope Stability: Intelligent Search

Q1: Which type of slip surface will give accurate results for retaining the wall in Slide2? Circular or Non-circular?

A1: The requirements for overall stability of retaining walls are normally stipulated by governing authorities, which typically prescribe the use of circular slip surfaces. However, we do recommend to run a non-circular analysis as well.

Q2: What is the RAM required to run these models on a laptop? Any recommendations?

A2: For Slide3 we do recommend a minimum RAM of 32gb as per the website:

<https://www.rocscience.com/help/slide3/documentation/program-overview/hardware-requirements>

Q3: How do you compute the regions of interest?

A3: Surfaces > Region of interest > Create Regions of Interest

Q4: What is the interaction with water?

A4: The Intelligent Search supports models with groundwater, weak layer, anisotropic surfaces the same as other search options.

Q5: Can modelling be possible with combination of saturation and earthquake at the same time?

A5: Yes it is possible.

Q6: Can you combine the DFN feature with Intelligent Search?

A6: DFN feature is in RS3. Intelligent Search is the search method in Slide3. However, you can take your models from Slide3 and import the project into RS3 to do FEM analysis.

Q7: How do you recommend performing QA/QC on critical slip surfaces in 3D? For example, in 2D we might check inter-slice tensile forces and add a tension crack to remove them. Is there a procedure you recommend in 3D to check the validity of a surface?

A7: In 3D, we have similar options as 2D. You can look at column forces (in the new feature of Slide3 we show column force graphs and also change the colour of the columns in tension) and define tension cracks either by importing surface if you have any or defining tension by location. There are some advanced settings addressed in the documentation allow for further handling of tensile forces. In some cases, the theory in LEM is not capable of handling slip surfaces with significant tensile forces, and verification against other method such as FEM is recommended.

Q8: What filters are you applying when searching for surfaces in Slide3 and why?

A8: Normally we do not apply filters if it is not necessary. If you see very tiny and shallow slip surfaces, you can apply different filters such as minimum depth which makes sure that the critical slip surface is deep enough. Also, you can specify a search limit box if you wish to focus on a particular region of the model.

Q9: In simple models do we need to implement the Intelligent Search?

A9: Intelligent Search gives the same answer as classic search for simple models. The main application of it is for more complex models and also big models.

Q10: What is the largest model area that can be handled by the program for intelligent search?

A10: In Slide3 and RS3 you can handle any size of a practical model. There is no limitation. However, for complicated models we would recommend focusing the search in on smaller regions to refine the analysis locally.