Short Course on

Rock slope stability analyses
From photogrammetric 3D models to stability assessment

The course addresses the following topics with real world cases from surface mining

- 3D model generation from aerial and terrestrial imagery
- Mapping geological structures from photogrammetric 3D models using interactive and automatic methods
- Rock mass parameters and stability assessment using 3D modelling techniques
- Integration of radar monitoring data
- Future of mining geotechnical digital twins: mapping – modelling – monitoring

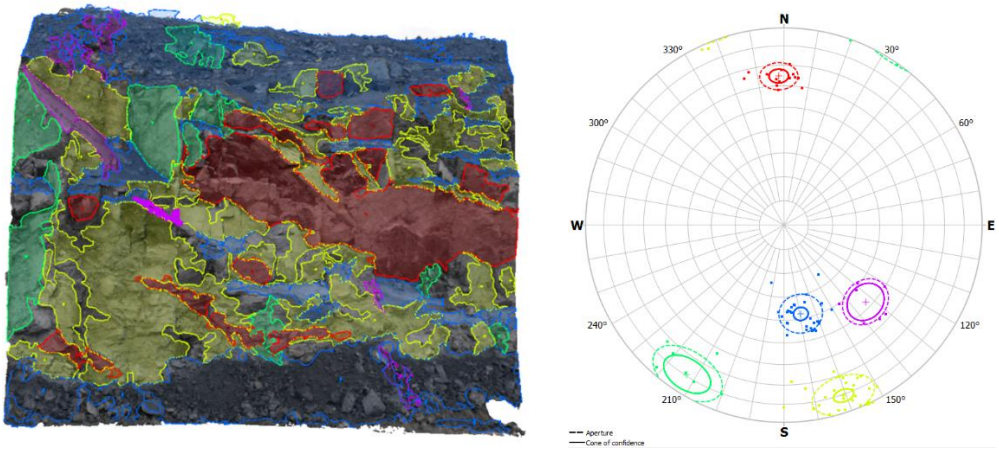

Figure 1: Automatic analysis of discontinuity areas (left) and automatic grouping into sets (right)

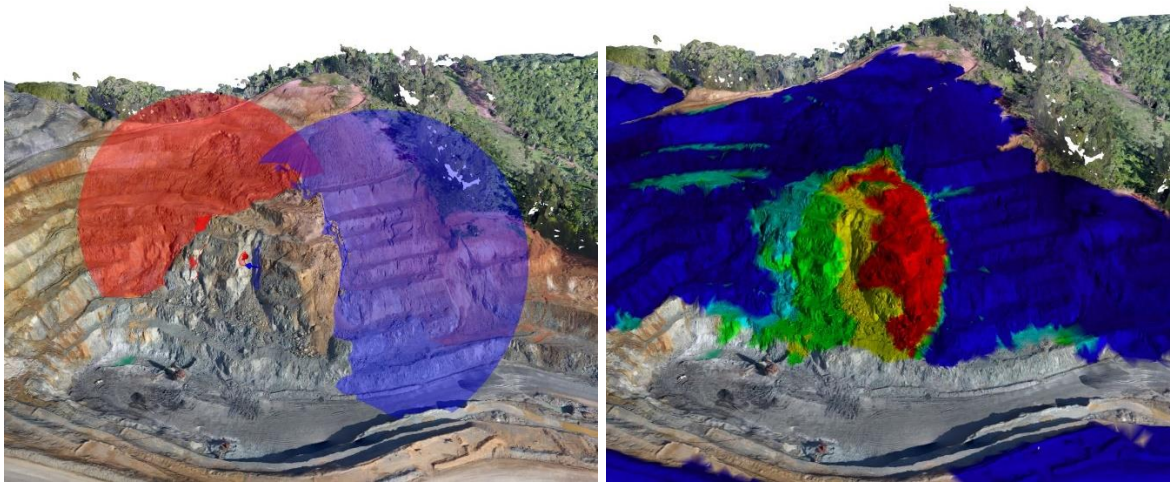

Figure 2: Detailed 3D model and mapped major structures including orientation information (left); Displacement data from radar combined with detailed 3D model (right)

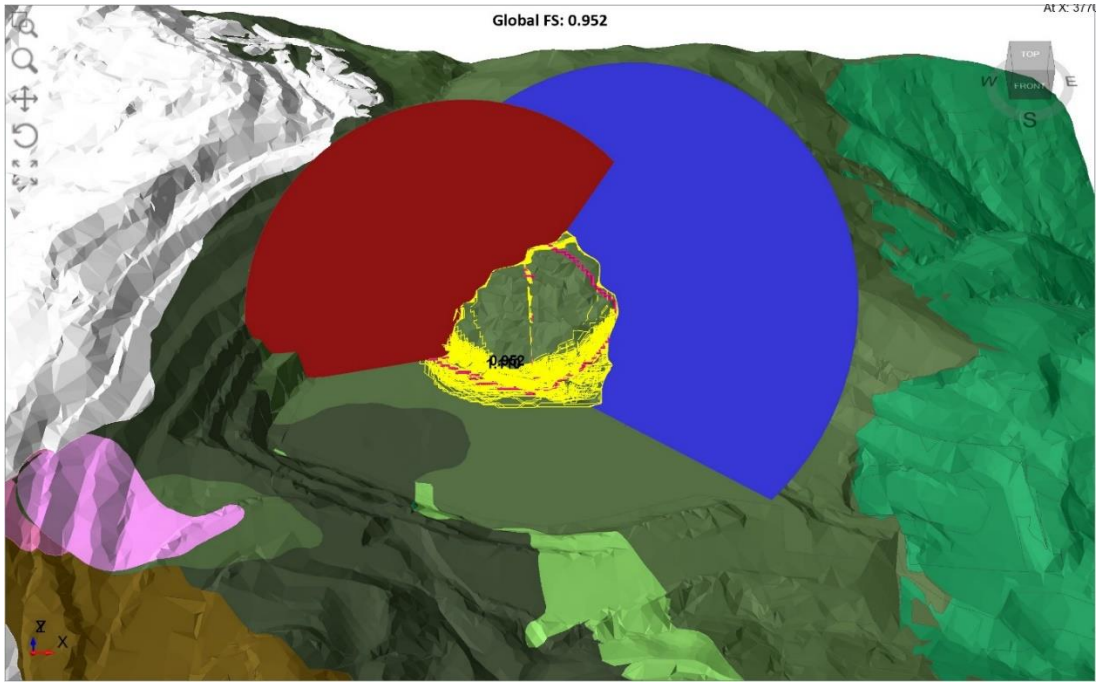

Figure 3: 3D model in limit equilibrium analysis software Slide3

ISRM 2023 Workshop B: Rock slope stability analyses - From photogrammetric 3D models to stability assessment

10.10.2023

Start	End	Duration	Topic	Speaker
13:30	13:45	00:15	Introduction - Overview	AGa
13:45	14:30	00:45	3D model generation from aerial and terrestrial imagery	AGa
14:30	14:35	00:05	Short break	
14:35	14:55	00:20	Mapping geological structures from photogrammetric 3D models	MPo
14:55	15:15	00:20	Determination of joint sets and discontinuity modelling	MPo
15:15	15:30	00:15	Coffee break	
15:30	16:30	01:00	Rock mass parameters and stability assessment - introduction	NBa
16:30	16:35	00:05	Short break	
16:35	17:35	01:00	3D slope stability modelling and integration with remote sensing data	NBa
17:35	17:45	00:10	Wrap up	All

Presenters:

- Neil Bar, Gecko Geotechnics, St. Vincent and the Grenadines
- Andreas Gaich, 3GSM, Austria
- Markus Pötsch, 3GSM, Austria