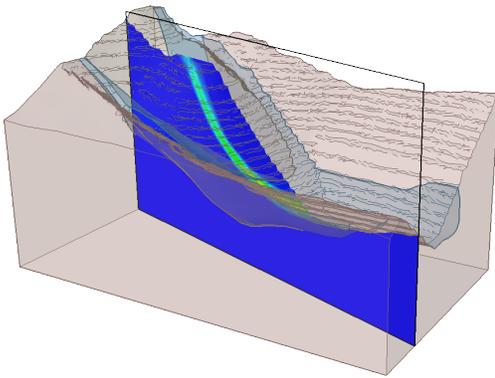




## COURSE OUTLINE

April 22–23, 2021

# Finite Element Modelling of Civil & Mining Excavations



SSR analysis using RS3

The advent of cheap, powerful computing resources and easy-to-use software is making it possible to analyze everyday geotechnical problems with the Finite Element Method (FEM). This training will cover the application of two user-friendly and interactive Rocscience software – RS2 and RS3 – to analyze various geotechnical infrastructure in 2D and 3D. The course will examine the modelling of surface excavations and infrastructure, including earth-fill dams, braced excavations and foundations. Lastly, the course will explore the application of 3D software to underground excavation analysis.

The course aims at helping participants break down real-world problems into simpler solvable components and develop practical models that provide the required insights and answers. This will be achieved through a mix of presentations and “hands-on” tutorials.

### Tools Used



**RS2**  
2D Finite Element Analysis



**RS3**  
3D Finite Element Analysis

### Topics to be discussed will include the following:

- **Module I:** Overview of the Finite Element Method and Introduction to RS2
- **Module II:** Introduction to 3D Geotechnical Modelling with Rocscience Software Interfaces
- **Module III:** Analysis of Earth Structures and Foundations
- **Module IV:** Modelling of Tunnels & Underground Excavations

### Conference & Course Fees

**Early Bird:** \$395 USD

(January 1–February 14, 2021)

**Regular:** \$495 USD

(February 15–March 31, 2021)

If you wish to attend only the course,  
write to [ric2021@rocscience.com](mailto:ric2021@rocscience.com)

### What's Included:

- Course material package
- One month trial license of RS2 and RS3
- PDH certificate

### Who Should Attend?

The course is aimed at geotechnical engineers and students who wish to learn more about the application of numerical analysis software tools to geotechnical engineering. It will help engineers who are new to geotechnical modelling to learn how to solve their design and analysis problems using Rocscience software. It will also help experienced users to learn new tools and approaches in Rocscience software, particularly for 3D analysis.

### Course Instructors



**Reginald Hammah**  
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Director,  
Rocscience Africa



**Alison McQuillan**  
Ph.D., CP(Geotech) RPEQ  
Director,  
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**Alireza Azami**  
Ph.D.  
Geomechanics  
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