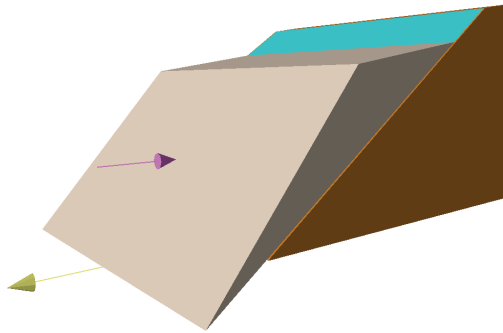
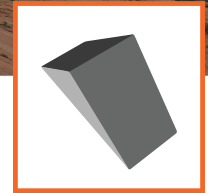


RocPlane

Planar Wedge Analysis for Slopes



Rock plane sliding along tension crack with water and seismic forces applied

What is RocPlane?

RocPlane is an interactive software tool for performing planar rock slope stability analysis and design. RocPlane makes it easy to quickly create planar models, visualize them in both 2D and 3D, and evaluate analysis results. RocPlane contains many helpful features that allow users to rapidly build, modify, and run models.

RocPlane also includes functionality for easily analyzing results, generating figures and charts, and producing convenient summaries of models and results. The report generation features of RocPlane are especially useful to engineers when writing reports with high-quality and professional-looking drawings and diagrams.

What's New in RocPlane

Automation Features

RocPlane introduces powerful new automation features that enable users to run large numbers of analyses and generate results quickly and efficiently. Batch Compute computes and generates results for multiple saved model files while Automate from Excel automates numerical model inputs, computes, and generates results for multiple scenarios.

- **Batch Compute Model Files**

- Compute multiple deterministic and probabilistic analyses models in one single process
- Results files can be exported to Excel or other data processing software for further analysis and interpretation

- **Automate Model Inputs from Excel**

- Pre-process numerical inputs, automate the computation of millions of wedges, and generate results for post-processing
- Pre-processing can be done directly in or imported into the Excel automation file
- Numerical inputs for wedge geometry, strength, seismic, water pressure, and scaling can all be automated

- **Robust and Customized Analyses with Automate from Excel**

- Custom sensitivity analysis by varying any one input parameter or several input parameters simultaneously
- Custom probabilistic analysis with random variables generated based on a custom sampling method and probabilistic distribution
- Custom bench analysis with a range of bench face angles

Plans & Pricing

Personal License: Locked to one computer.

- Lease: **USD \$395/year**
Leased annually. Includes Maintenance+.
- Perpetual: **USD \$795**
Purchased outright. Includes 12 months of Maintenance+.

Flexible License: Installed on any number of machines. The license file sits on the server.

- Lease: **USD \$595/year**
Leased annually. Includes Maintenance+.
- Perpetual: **USD \$1,195**
Purchased outright. Includes 12 months of Maintenance+.

Maintenance+

Maintenance+ is our enhanced maintenance and support services subscription, purchased annually at 20% of the license cost.

With Maintenance+ Continuous Software you get access to all feature releases, enhancements, and bug fixes throughout the year and as soon as they're available. You also have access to convenient License Services, the support of our experts, and exclusive learning offerings.

Find more details: rocscience.com/software/rocplane

Contact us at software@rocscience.com

Analysis

- Deterministic or probabilistic
- Metric or imperial units
- Eurocode design standards
- Bench design

Analysis Results

- Sidebar information panel
- Info Viewer analysis summary
- One-click export of data and charts to Excel

Automation

- Batch Compute model files
- Automate Model Inputs from Excel

Bench Analysis

- Optimize bench design
- Fixed bench width or inter-ramp angle
- Joint persistence determines if wedge can form

Loading

- Water pressure on joints
- Poned water analysis
- Seismic coefficient
- External forces
- Pressure (surcharge or support)

Probabilistic Analysis

- Statistical distributions—normal, uniform, triangular, beta, exponential, lognormal, gamma
- Histogram, cumulative, and scatter plots
- Probability of failure, reliability index
- Monte Carlo or Latin Hypercube simulation
- Random or pseudo-random sampling
- Shear strength—define variability of mean strength envelope or individual strength parameters
- Correlation coefficient for cohesion and friction angle

- Best fit distribution, regression line
- Highlight failed wedges on plots
- Interactive sampler
- Select random wedges

Sensitivity Analysis

- Determine effect of individual variables on safety factor
- Multiple variables on one plot

Shear Strength

- Mohr-Coulomb
- Barton-Bandis
- Power Curve
- Hoek-Brown
- Waviness angle

Slope Properties

- Dip angle of slope, upper face, and failure plane
- Slope height
- Bench width
- Overhanging slope
- Unit weight

Support

- Rock bolts
 - Define bolt properties from the following bolt types: Mechanically Anchored, Grouted Dowel, Cable Bolt, Split Set, Swellex, and Simple Bolt Force
 - Option to use bolt Shear Strength
 - Option to apply Bolt Orientation Efficiency factor
- Pressure
- Active or passive support

Tension Crack

- Optional tension crack plane
- Vertical or non-vertical
- User-defined or automatic location (minimum FS)

Viewing Options

- 3D wedge view
- Interactively rotate, zoom, and pan
- Move wedge along sliding plane
- 2D view with dimensioning and annotations
- Export image files: .png, .jpg, .gif, .bmp, .emf, .wmf

Wedge Size

- Scale wedge size by height, bench width, persistence, and volume
- Minimum wedge size