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
Support for UnWedge Bolt Models
• 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 instead when the bolt is in the right deformation mode
• Option to apply Bolt Orientation Efficiency factor calculated from the Cosine Tension/Shear or Linear Tension/Shear method
• Bolt model (Active/Passive bolts) is now associated with bolt properties instead of each individual bolt

Ponded Water Analysis
• Option to apply ponded water pressures and forces acting on the slope and compute plane water pressures and forces due to ponded water effects
• Option to display wetted area and ponded water force arrows
• Probabilistic and sensitivity analyses for ponded water depth

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
RocPlane Technical Specifications

**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

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

**Loading**
- Water pressure on joints
- Ponded 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