

Earthen berms on a slope and resulting rock paths

What is RocFall?

RocFall is a 2D statistical analysis program designed to assist with the assessment of slopes at risk for rockfalls.

RocFall allows the user to perform both lumped mass and rigid body rockfall analyses. Users can add rockfall mitigation tools, including barriers and earthen berms. Distributions of energy, velocity, and bounce height as well as the location of rock endpoints are calculated along the slope profile. Distributions can be graphed, and comprehensive statistics are automatically calculated.

What's New in RocFall

Project Settings

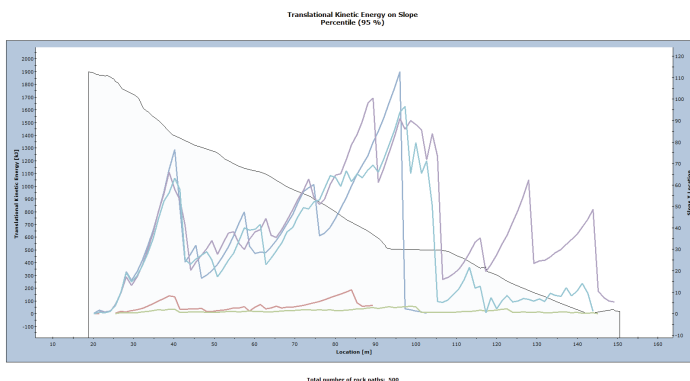
- Import/Export predefined project settings
- Collectors can record multiple impacts or the first impact from each rock path

Barrier Analysis and Design Tools

- PFEIFER ISOFER barriers added to built-in barrier library
- Added impact energy percentile design parameter to non-factored method
- Barriers can now be placed on berms

Graphs

- Toggle end reasons, seeders, rock types, and rock shapes added to Endpoint location, envelope, and distribution graphs



Translational kinetic energy on slope by different rock shapes

Find more details: rocscience.com/software/rocfall

Plans & Pricing

Personal License: Locked to one computer.

- Lease: **USD \$795/year**
Leased annually. Includes Maintenance+.
- Perpetual: **USD \$1,595**
Purchased outright. Includes 12 months of Maintenance+.

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

- Lease: **USD \$1,095/year**
Leased annually. Includes Maintenance+.
- Perpetual: **USD \$2,195**
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.

Contact us at software@rocscience.com

Coefficients of Restitution

- Table of coefficients of restitution included
- Table of coefficients of friction included

Data Collectors

- Gather information/statistics at any location

Earthen Berms

- Rockfall mitigation tool
- Triangular, trapezoidal, or custom berm shapes
- Calculate impact with berms or specify berms with infinite capacities

Enhanced Barrier Analysis

- Unlimited number of barriers
- Deformable barriers
- Single variable barrier sensitivity analysis
- Double variable barrier sensitivity analysis
- Reusable barrier properties
- Built-in library includes Maccaferri, Trumer-Schutzbauten, Geobruigg, and PFEIFER ISOFER barriers
- Check barrier designs per Italian or Austrian codes or un-factored method

Filters

- Pick particular rock paths to create statistics/graphs
- Define advanced filters based on combinations of criteria

Graphs Produced

- Histogram of rock endpoint locations
- Mean, standard deviation, max graphs (energy, velocity, bounce height, etc.)
- Distribution graphs show distribution at specific locations (same data as envelope graphs)
- Create histograms or cumulative distributions for specific locations (impact locations, energy, etc.)
- Toggle end reasons, seeders, rock types, and rock shapes added to Endpoint location, envelope, and distribution graphs

Lumped Mass Method

- Model each rock as a particle with only mass
- Use both normal and tangential coefficients of restitution
- Scale normal coefficient of restitution by rock mass or impact velocity

Output

- Copy graphs/plots to clipboard
- Transfer plots to Excel with one click
- Add property tables to the model view
- Export rock paths to .dxf format
- Copy geometry/parameters to clipboard
- Advanced report generation
- Save screen to image file or capture to clipboard
- Slope and slope/chart views are easily added
- Animate rockfall results
- Display contact points
- Save computed paths

Rigid Body Method

- Rock type library
- Define rock shape and size
- Polygonal rock shapes and Fourier shapes
- Custom polygons
- Forest damping for treed slopes
- Variable friction according to sliding distance
- Viscoplastic ground drag

Rock Starting Location

- Specify single location, point seeder series, and line seeders
- Unlimited number of starting locations
- Probability settings for each seeder
- Random/Pseudo-random number generation

Slope

- No restriction on slope geometry (e.g., overhanging sections)
- Statistically defined material properties
- Forest damping for treed slopes
- Advanced friction parameters; scarring and viscous damping may be enabled
- Model crest loss
- Statistically defined slope vertices
- Import/export material properties
- Import .dxf, .crsp (version 3 & 4) files
- Import .bmp images
- Define slope based on segment lengths and angles

Verification

- Extensive verification manual