Classic Limit Equilibrium and Stress-based Methods of Slope Analysis

SVSLOPE® 2D represents the new standard in slope stability analysis. Users can perform classic limit equilibrium slope analysis of soil or rock slopes by the method of slices or newer stress-based methods. It has the most comprehensive total set of material strength models, circular and non-circular search methods and coupled groundwater analysis options than anyone else in the industry.

SIMPLY THE BEST GEOTECHNICAL SLOPE STABILITY PACKAGE ON THE MARKET

• 3rd generation 2D analysis
• Easy to use with a more advanced yet intuitive user interface
• Recent 10X speed improvement (2017) leaves all other’s claims of being faster without merit
• More comprehensive search capabilities for slope failures including Entry & Exit, Slope Search, Moving Wedges and Fully Specified slips combined with General Surface, Wedge or Ellipsoid
• Unmatched true Multi-Plane Analysis (MPA™) feature, allowing application over large regions considering ellipsoid or compositie ellipsoid & fault slips
• Superior circular & non-circular composite fault slip shape options. Faults can be defined by planes or meshes
• Creation of complex 3D models and surface intersections with SVDESIGNER™ conceptual model builder
• Easily generate 3D models from 2D cross-sections or slice 3D models into 2D cross-sections
• Advanced probabilistic analysis in 2D (Monte Carlo, Latin Hypercube) and Alternative Point Estimation Method (APEM)
• New and improved Block Searching
• Optimization of Critical Slip Surfaces
• Kulhawy stress-based analysis (used with SVSOLID™GT)
• Comprehensive set of more than 20 available material models including multiple unsaturated, ALM 1/2/3, Anisotropic Strength & Function, Power Curve 2, Frictional-Undrained, Hoek-Brown and Mohr-Coulomb Curved Surface Envelope models among many others
• More available options of saturated/unsaturated transient or steady-state seepage than any other package when coupled with your choice of SVFLUX™GE, SVFLUX™GT or SVFLUX™WR
• One- or two-way sensitivity analysis allows the generation of a contoured surface of the factor of safety based on the relationship between two input variables

• More comprehensive Interslice Force Function capability including Clipped-Sine, Trapezoidal, Fredlund-Wilson and user-defined
• State-of-the-art report-ready graphical presentation of results that is the best in the industry with no additional manipulation required
• Heavily benchmarked solver with research dating back to 1993.
• Import Clara/W, Slope/W, Slide, DXF, SHP, ESRI and borehole data

Our award winning limit equilibrium slope stability package continues to receive significant development effort from our team. The net result is a number of features which solidify the software’s position as the best geotechnical stability package on the market.

Advanced searching methods are implemented to correctly determine the location of the critical slip surface. Advanced probabilistic analysis or accommodation of spatial variation is possible with the software. SVSLOPE® can be combined with SVFLUX™ to import pore-water pressures or SVSOLID™ to import soil stress conditions.

All of the analysis modules within SVOFFICE™S are tightly integrated with our SVDESIGNER™ conceptual modeling software and the subsequent ability to represent complex models built from triangulated surfaces (TINS) as well as grids.

The team at SoilVision Systems Ltd. represents an advanced group of geotechnical engineers and software developers with M.Sc. and Ph.D. degrees and decades of experience which ensures that your modeling will be successful and reliable. This allows users to be confident that results from SVSLOPE® are correct.

SVSLOPE® is currently being used on world-class slope stability projects. Top slope stability industry experts already support the use of SVSLOPE® as the new standard in slope stability modeling.
**CALCULATION METHODS**
- Ordinary/Fellenius
- Bishop simplified
- Janbu simplified
- Corps of Engineers #1
- Corps of Engineers #2
- Low-Karafath
- Spencer
- Morgenstern-Price
- GLE (Fredlund)
- Sarma
- Kulhawy
- SAFE
- Rapid drawdown (Duncan & Wright)
- Rapid drawdown (Effective stress + B-bar)
  - Coupled with SVFLUX™

**SOLVER**
- Highly optimized computation engine
- Rapid parallel processing
- Metric or Imperial units
- Peer-reviewed
- Heavily benchmarked
- Developed based on research started in 1993

**GEOMETRY/MODELING**
- Unlimited regions
- Unlimited materials
- Finite element integration
- Overlapping regions
- Import borehole data
- Import regions from DXF files
- Import shape files (SHP)
- Import ESRI ASCII grid files
- Import from Slope/W and Slide
- Create 3D models using SVDISIGNER™
  - Export 2D cross-sections
  - Advanced surface intersections
  - Import OBJ, 3DS, DEM, DTM, DXF
  - Import DAT (TecPlot)
  - Import ASCII/CSV/XLS
  - Import ESRI grid

**GROUNDWATER COUPLING**
- Couple with SVFLUX™GT
- Couple with SVFLUX™GE
- Couple with SVFLUX™WR
- Ru
- B-bar
- Piezometric lines
- Grid of pressure heads
- Phreatic correction
- Steady-state
- Transient-state (saturated/unsaturated)
- Climate

**STRESS COUPLING**
- Couple with SVSOIL™GT
  - Allows for more comprehensive Kulhawy stress-based analysis

**INTERSLICE FORCE FUNCTIONS**
- Constant
- Half-sine
- Clipped-sine
- Trapezoidal
- Army Corp of Eng assumption 1 & 2
- Low-Karafath
- Fredlund-Wilson
- Fully specified

**LOADING**
- Point loads
- Distributed loads (uniform or variable)
- Seismic loads (Spectral Pseudo-Static)

**MATERIAL STRENGTH MODELS**
- Mohr-Coulomb
- Mohr-Coulomb - curved surface envelope
- Undrained strength (φ = 0)
- Undrained strength ratio
- SHANSEP
- Depth-dependent undrained
- No strength (water)
- Infinite strength (bedrock)
- Anisotropic strength
- Anisotropic function
- Barton-Bandis
- Shear/Normal function
- Bilinear
- Hoek-Brown
- Hoek-Brown generalized
- Power-Curve 1 and 2
- Frictional-Undrained
- Unsatuated
  - φ-b
  - Vanapalli
  - Fredlund
  - Vilar
  - Khalili
  - Bao

**PROBABILITY METHODS**
- Monte Carlo
- Latin Hypercube
- Distributions
  - Normal
  - Uniform
  - Triangular
  - LogNormal
- APEM
  - “Floating” critical slip surface
  - 1D spatial variability
  - 2D spatial variability

**CIRCULAR SEARCH METHODS**
- Focus search
  - Point
  - Line
  - Tangent
- True Multi-Plane Analysis (MPA™)
  - Large region application
  - Ellipsoid
  - Composite ellipsoid & fault
- Grid and tangent
- Entry and exit
- Auto refine search
- Slope search
- Fully specified

**NON-CIRCULAR SEARCH METHODS**
- Block search
  - Point
  - Line
  - Window
- Path search
- Greco
- Dynamic programming
- Fully specified segments

**SLIP SHAPE**
- Circular
- Non-circular
- Composite

**SENSITIVITY METHODS**
- One-way sensitivity
- Two-way sensitivity

**ADVANCED FEATURES**
- Excess pore pressure
- Slice 3D models to 2D cross-section
- Comprehensive unsaturated analysis
- Unsaturated shear strength
- Tension cracks
- Reinforcement
- Tension cracks
- Anisotropic regions
- Rapid drawdown

**SUPPORTS**
- Active vs passive anchors
- End-anchored bolts
- Easily define/edit patterns
- Grouted tiebacks
- Grouted tiebacks with friction
- Soil nails
- Hong Kong soil nails
- Geotextiles
- Piles and Micropiles
- Back analysis of support force
- User-defined support model

**GENERAL**
- Highly advanced CAD features
- Easy to use and intuitive user interface
- Optimized menu system
- SVOFFICE™ Manager (beginner/expert mode)
- 64-bit multi-core CPU and multi-threading
- Recent 10X speed improvement (2017)
- Compatible with Windows 7, 8, 10
- Batch analysis
- Extensive QAQC program
- Fully-integrated help system
- Unmatched customer support
- Responsive update cycle
- Industry-leading graphical representation of results
  (fully scalable/report-ready)

**PRICING (USD)**
- Standard Perpetual (full purchase) $2,895
- Standard Annual Lease $1,737/year
- Professional Perpetual (full purchase) $4,795
- Professional Annual Lease $2,877/year

Network licensing can be purchased for 150% cost of personal single user licenses.

Exclusive VIP-Upgrade subscription gives you an All-Access Pass to new versions (major updates) and new general feature additions (minor updates), maintenance releases and bug fixes as well as priority technical support. You may enjoy these benefits for as long as you are a subscriber.

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