



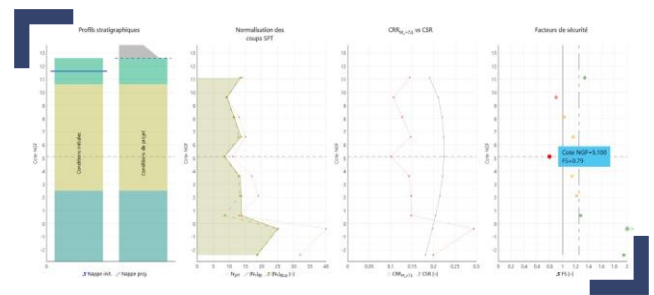
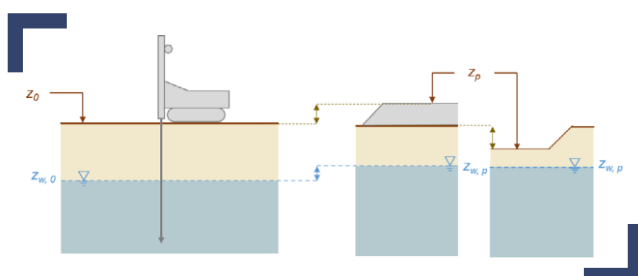
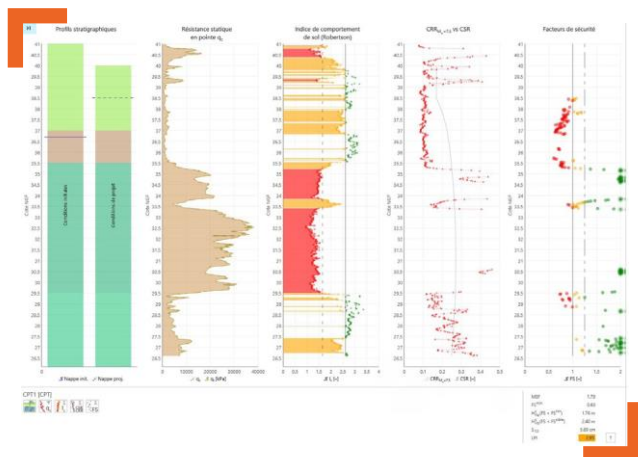
Slake

Slake is dedicated to the **analysis of the liquefaction hazard** of soils subjected to seismic loads, based on the exploitation of **in situ tests**.

Quantification of the liquefaction hazard

Slake evaluates safety factors against the liquefaction hazard by implementing the **semi-empirical NCEER method** as described by Youd and Idriss (2001):

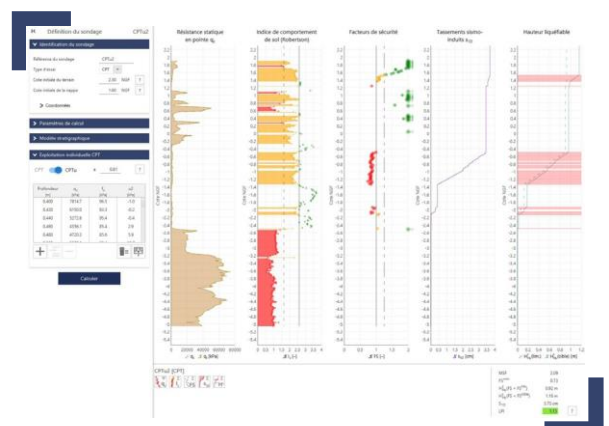
- Using SPT and/or CPT/CPTu data.
- Accounting for changes in the piezometric and topographical conditions (large excavations or embankments) to reflect the project context.
- With a controlled application of the calculation assumptions and corrective factors (magnitude scaling factor MSF, confining pressure K_{σ}).



To go further

These analysis are supplemented by the calculation of **additional indicators**:

- Evaluation of the **seismic-induced settlements** based on Ishihara and Yoshimine (1992), Zhang, Robertson and Brachman (2002) and/or Idriss and Boulanger (2008).
- Calculation of the **cumulative liquefaction heights** against a user-defined safety threshold.
- Assessment of the **liquefaction potential index (LPI)** according to Iwasaki (1981).





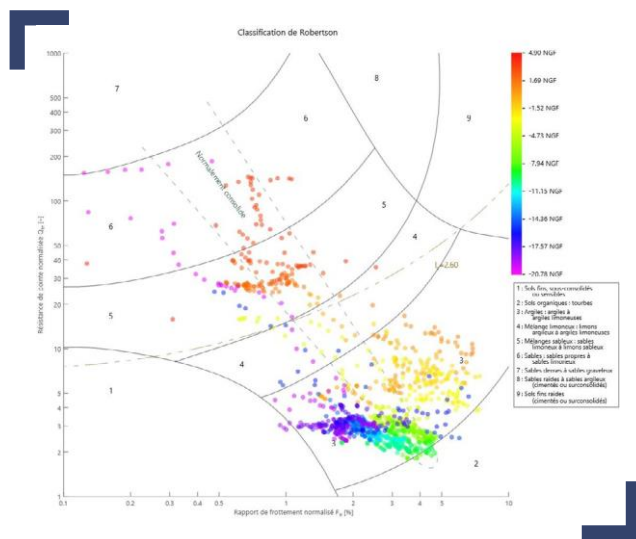
Slake

SOIL LIQUEFACTION ANALYSIS

A decision-making program

Slake provides all the relevant features to support the user in his analysis:

- Parallel management of **several SPT and CPT/CPTu** result sets within a single project.
- **Interactive graphical display** of the input data and analysis results.
- A "comparison mode" for **superimposing calculation results** based on different in-situ tests.
- Display of the results in the form of **exportable tables** for further processing.



MINIMUM HARDWARE REQUIREMENTS

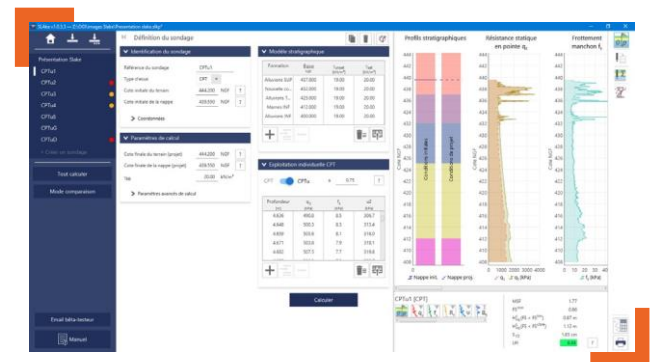
PC-compatible computer with :

- Intel® or AMD 64-bits processor @ 2 GHz
- 4 GB RAM - 512 MB VRAM
- 1366 × 768 resolution
- USB port
- 500 MB free hard-disk space
- Windows® 7 SP1/8/10, 64 bits

A transparent tool for users

At any time, the user is guided to conduct his analysis in an informed way, thanks to:

- **Numerous help figures** to help setting the proper parameter values.
- **A systematic display of the project units** for each of the parameters.
- The ability to display and edit all advanced settings.
- A **detailed technical manual** accessible directly from the project definition window.



A user-friendly interface

- **Easy navigation** through the various data sets of the project and a permanent display of the calculation status for each project.
- **Smart importation tools** for soils and boreholes data allowing for the instant conversion of units.
- Generation of **customized calculation reports** for the presentation of input data and analysis results.