



## ENGINEERING GEOLOGY, SOIL MECHANICS AND GEOTECHNICS

The University of Miskolc has a strong tradition in the fields of engineering geology, soil mechanics and geotechnics, which study, and research the physical and mechanical effects of the built environment on soil - with a wide range of field and laboratory tools and test methods.

The aim of the Soil and Rock Testing Laboratory is for the University of Miskolc to get involved in various segments of the construction industry with the help of industrial partners. In the industry currently operating as a leading sector in Hungary, geotechnical preparation, and inspection activities prior to major investments play an important role. Numerous such investments are currently underway, such as the construction of motorways, roads, railway tracks and stadiums, or even the revision and construction of flood reservoirs and dam systems.



### SERVICES

- Execution of soil investigation and sampling
- Classification of soils with laboratory measurement
- Measure the shear strength of soil
- Compressibility test of soil
- Permeability test of soil
- Wide spectrum of geotechnical software modelling
- Compilation and review of soil test reports
- Rock mechanical measurements
- Project management



### INSTRUMENTS

- Wille flexible wall permeabimeter
- Rigid wall permeabimeter
- Field infiltrometer, oedometer equipment
- MTV-GG 2007 large scale shear machine (custom development)
- Triaxial cells; shear machines, Proctor tester, determination of water storage characteristics, soil classification, Enslin-Neff equipment
- Manual and mechanical soil mechanical drilling, DP tester and Inclinometers
- Field and laboratory tools for water sampling, Surfer, Grapher software packages
- Geo5 software packages



### REFERENCES

- University of Miskolc - Soil investigation report for the construction permit plan of the planned EMC hall of the University of Miskolc
- Golder Associates Zrt. - Carrying out soil mechanics laboratory tests of soil samples and providing measurement results for testing barrier liners of landfills
- Control measurements of the motion monitoring network of the eastern hillside of Avas in Miskolc
- Perlit-92 Kft. - Preparation of a hydrogeological expert opinion revealing the hydrogeological reasons for the landslide of the tailings dump at Pálháza