SERENGEO RockLab
SERENGEO brings to market innovative services deriving from the results of the researches developed at the University and from the knowledge acquired in the field of Mining Engineering, in order to support and improve the productive world.

Our objective is to spread design and characterization criteria for rock materials and rock masses, which have to be technically, economically and environmentally sustainable.

SERENGEO addresses to the construction companies, the public administrations and the industry, providing the following services:

- rock materials & rock masses characterization
- innovative geomechanical test design & planning
- environmental monitoring.
Why choose SERENGEO?

- We have a cumulated experience of more than 50 years in the environmental mining sector and collaborations with the most important national and international research centers.

- We put the high level knowledge acquired during years of research in Georesources Engineering at your service.

- We provide a highly customized service, to effectively meet your needs.
SERENGEIO RockLab

Work tools

SERENGEIO provides its services in collaboration with the Laboratory of Geoengineering and Natural Resources (LAGIRN) of DICAM, which disposes of facilities for the execution of geomechanical tests according to National and International Standards (UNI, EN, ASTM, ISRM) and the Suggested Methods of International Society of Rock Mechanics (ISRM), and ad-hoc equipment developed at DICAM for peculiar applications.
Rock materials characterization

Rock materials have many applications and their characterization is essential to assess their performances in various fields, such as in mining and civil engineering and tunneling, as well as in the Cultural Heritage preservation.

SERENGEIO provides assistance in rock materials characterization, in critically analyzing and interpreting the results of geomechanical tests.

The cutting edge know-how coming from scientific research is used to serve the customer.

In addition to the conventional techniques, SERENGEIO is able to design ad-hoc tests on rock materials for specific applications. This service requires a long experience and a deep expertise in the rock mechanics field, which the members of SERENGEIO acquired in the years through the research activity at the University, and it allows obtaining a detailed and personalized analysis of the material studied, related to the problem at hand.
Rock masses characterization

The construction of every civil work in rock needs a preliminary investigation to determine the mechanical properties of the rock masses (rock materials and discontinuities) affected by the excavation. For carrying out rock masses tests, SERENGEIO collaborates with the laboratory LAGIRN of Bologna University which is supplied with equipment to perform geomechanical testing on rock masses both in situ and in laboratory.

In addition to the standard survey techniques, SERENGEIO is able to design ad-hoc tests on rock masses to solve specific problems.

For instance, in the past the members of SERENGEIO designed and performed non-conventional shear tests (Bim Test) for "bimrocks". Furthermore, SERENGEIO also utilizes a 3D camera probe for cored and drilled holes, to examine the rock masses structures, with continuous logging and a software for images processing.
Innovative geomechanical test design & planning

Rock materials have many applications in various fields, from civil engineering to chemical industry and agriculture. The rock materials applications, especially as building or ornamental stones, are rarely supported by a deep knowledge of the rock behavior in relation to their specific use. Designers often underestimate the key importance of a careful preliminary characterization of the rock that takes into account the specific applications.

SERENGEO provides services of designing of geomechanical tests to assess the performance of the rock in specific applications, proposing new approaches and innovative procedures.

The service customization, the high scientific and professional expertise of the working group, the scientific support of Prof. Berry (Full Professor in Mining, Tunneling and Excavation Engineering at the University of Bologna) and the collaboration of the LAGIRN, laboratory of rock mechanics of Bologna University, are the main strengths of SERENGEO.
Rock materials characterization

Construction sites TAV - COCIV

Drillability test on rock material for the selection of the mechanized digging machine and for forecasting the excavation performance.
Rock masses characterization

Solvay Italia

Expeditious characterization of limestone rock used for Solvay soda's production.

Development of a destructive test for the selection of the material in the quarry.
Rock masses characterization

Nuovo Farma S.c. a r.l.

Characterization of antimony mineralized rock masses and of the excavated rock and soil for the construction of road infrastructures
Geomechanical test design

Il Casone

Design of geomechanical resistance tests for sandstone slabs reinforced with panels of glass wool, to be used as flooring for interior / exterior.


SERENGEO Srl
Via U. Terracini 28, 40131 Bologna, Italy

www.serengeo.com
serengeo@serengeo.com
+39 051 4843504