

Syllabus 2022-2023

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| Teacher (name and affiliation) | Federico Agliardi and Andrea Bistacchi (UNIMIB, DISAT) |
| Title | Field and remote-sensing techniques for the advanced characterization of rock fractures in outcrops |
| Language | <i>English</i> |
| CFU | 2 |
| Hours | <i>20h: 8h lessons, 6h fieldwork, 6h lab work</i> |
| Program | <p>A proper characterization of rock fractures is the key to reconstruct the geological evolution and to model the hydro-mechanical behavior of fractured rock masses. Nevertheless, a statistically sound characterization of rock fractures is very difficult to achieve, due to a combination of inherent complexity, scale effects, statistical biases and practical survey difficulties.</p> <p>The fast development of remote-sensing 3D survey techniques (LiDAR and photogrammetry), survey platforms (terrestrial and airborne) and 3D geo-modeling tools (DOM, DFN, DFM, FEM) has opened new and accessible routes towards an improved characterization of rock fractures for geological and engineering problems.</p> <p>In this course, we will introduce and apply a workflow for the geometrical and mechanical characterization of fractured media to: (i) improve conceptual models in geological and engineering applications; (ii) provide consistent input datasets for 2D and 3D discrete, continuum-based and hybrid numerical models.</p> |
| Evaluation: YES/NO | <i>NO</i> |
| Calendar | <i>II semester</i> |