

Dottorato di Scienze della Terra

Giovedì 21 Maggio , ore 10.30

Aula Magna C412, Blocco C

Dipartimento di Fisica e Scienze della Terra Via Saragat, 1 Ferrara

Daive Elmo - Assistant Professor (Rock Mechanics)

Geomechanics Research Group, Institute of Mining Engineering

University of British Columbia, Vancouver, Canada

DFN Data Collection for Rock Engineering

The last decade has seen a major increase in use of the Discrete Fracture Network (DFN) approach, both as a stand-alone tool or integrated within more complex geomechanical simulations. The DFN approach offers the opportunity to maximise the use of fracture data collected from mapping of rock exposures and to construct synthetic rock mass (SRM) models. However, the value of the DFN model would directly depend on the quality and quantity of available field data, and the potential of DFN based modelling would be limited by insufficient care in collecting the necessary structural data at the required engineering scale. This presentation attempts to address several key questions about DFN modelling, for example: are current methods for discontinuity measurement suitable for DFN modelling? Is there a need to propose new “Guidelines for DFN data collection”? What do we measure and what do we need to change in the current practice? Finally, teaching and training aspects of DFN analyses for the new generation of geological engineers are considered.

