

## Discontinuity Spacing Analysis In Rock Masses Using 3d

Discontinuity Analysis for rock engineering Some Properties of Rock Discontinuity(Visit Open2study)

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~~COMPOSITE DECKING EXPLAINED HARD ROCK HOTEL COLLAPSE part 3 general rehash Introduction to Magnetotellurics – SAGE MT Facility Webinar Series Discontinuity Spacing Analysis In Rock~~

The discontinuity properties (i.e., spacing, persistence, roughness, infilling, weathering and presence of water) have a capital importance on the geomechanical behavior of the rock mass (Bieniawski, 1973, Priest and Hudson, 1976), and are usually characterized through classical time-consuming techniques (e.g., compass which are commonly utilized in order to obtain discontinuity orientation and also conventional measuring tapes which are used for the estimation of discontinuity spacing ...

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Abstract. The complete characterization of rock masses implies the acquisition of information of both, the materials which compose the rock mass and the discontinuities which divide the outcrop. Recent advances in the use of remote sensing techniques – such as Light Detection and Ranging (LiDAR) – allow the accurate and dense acquisition of 3D information that can be used for the characterization of discontinuities.

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Abstract The possible distributions of discontinuity spacings along a straight line through a rock mass are considered. Unless there is a large predominance of evenly spaced discontinuities, any combination of evenly spaced, clustered and randomly positioned discontinuities leads to a negative exponential form of frequency vs spacing value curve.

~~Discontinuity spacings in rock – ScienceDirect~~

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Discontinuity spacing is a basic measurement of the distance between one discontinuity and another. The scope of discontinuity spacing determination is to ascertain the size of the blocks that make up the rock mass because wall stability is strongly influenced by this block size. The discontinuity spacing parameter is often used in classification schemes such as the rock mass rating system.

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Discontinuities are major geological features in a rock mass. Discontinuity spacing is one of the important parameters in describing the quality of a complete rock mass. Discontinuity surveys are...

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If it is assumed that each small section of scanline has an equal chance of containing a discontinuity, the discontinuity positions are random and the spacing distribution can be studied in two ways: (a) the discrete case--a unit length of rock (say 10 mm) is considered intact if no discontinuity is present, and fractured if a discontinuity is present; the total scanline length must then be an integral multiple of the unit length; (b) the continuous case--the unit lengths become in ...

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In its most general sense, discontinuity spacing is the distance between one discontinuity and another. Discontinuity spacing, which is linked to the reciprocal of discontinuity frequency, is widely used as a measure of the 'quality' of a rock mass for classification schemes such as those outlined in Appendix C.

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Bearing this in mind, it is surprising that until now there has been no book dedicated specifically to the subject of discontinuity analysis in rock engineering. Show all. Reviews. ... Discontinuity spacing. Pages 121-149. Priest, Stephen D. Preview Buy Chapter 25,95 ...

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•Discontinuity- General term for any mechanical discontinuity in a rock mass. Discontinuities include all types of mechanical break or plane of weakness in rock mass such as joints, bedding plane, fractures and shear zones that weakened the strength of rock masses.

~~ENGINEERING GEOLOGY AND ROCK MECHANICS Discontinuities ...~~

Discontinuities, defined as breaks or interruptions of the mechanical properties of a solid, are recognised in the literature as being of vital importance in controlling the behaviour of rock during tunnelling. This thesis presents a detailed study of an experimental tunnel excavated in discontinuous rock (Lower Chalk) at Chinnor in Oxfordshire.

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Terms which precisely describe the spacing of joints and bedding planes are needed in engineering investigations of rock masses. Several schemes have been used by geologists for the description of bedding units and these were summarized by Ingram (1954). Because of their variations and irregular scales he proposed a classification based on a logarithmic scale starting at 10 mm.

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The influence of discontinuities on the mechanical behavior of rock masses, demands a detailed knowledge about the geometrical properties of the existing discontinuity network. Traditional...

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Analysis of the discontinuity spacing data does not only allow us to estimate the mean block volume but also enables us to determine whether the blocks can be economically extracted from a rock mass. Thus if the estimated mean block volume is small in a quarry site, in such case, it will not be economical to invest in such area.

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A discontinuity in geotechnical engineering (in geotechnical literature often denoted by joint) is a plane or surface that marks a change in physical or chemical characteristics in a soil or rock mass. A discontinuity can be, for example, a bedding, schistosity, foliation, joint, cleavage, fracture, fissure, crack, or fault plane.

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