BGA Evening Meeting

Wednesday 5th February at 18:00

Institution of Civil Engineers, One Great George Street, London, SW1P 3AA

The many faces of Q – Rock mass characterization for tunnels, caverns, slopes, TBM prognosis, deformability, shear strength, seismic velocity, permeability…

Nick Barton
Nick Barton & Associates

Summary:

In civil engineering projects involving concrete, steel and foundations in soil, it is possible to fabricate, sample, or test representative elements of the media that will be involved in the foundation and construction. In the case of tunnel or cavern excavations, or foundations in jointed and perhaps faulted rock this 'simplicity' is absent. 'Samples' are too big. This is where a good rock mass classification comes into its own. Ratings for some principal components like relative block size, inter-block friction, stress/strength ratio and water, are combined to form quantitative guidance sometimes using simple equations. The Q-system now addresses such widely ranging themes as core-logging, tunnel-logging, tunnel support, shotcrete thickness, bolt spacing, seismic velocity, deformation modulus, tunnel and cavern deformation, shear strength, over-break, permeability, TBM prognosis, tunnel delays in fault zones, construction cost and time, safe rock slope angles. The lecture will be liberally illustrated with the basics and with some good examples of application.

Programme
17:30 Tea/coffee - Brasserie
18:00 Lecture followed by Q & A
19:15 Drinks reception

Advance registration not required
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Drinks reception sponsor

Further information overleaf/

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The Many Faces of Q – Rock Mass Characterization

Biography

Nick Barton has a Ph.D. from Imperial College. He worked at NGI in Oslo between 1971 and 2000, and was also four years at TerraTek in Salt Lake City, from 1981-1984. Since 2000 he has a rock engineering consultancy, Nick Barton & Associates, based in Oslo. He has consulted on projects in 40 countries during a total of 48 years, has 260 publications as first or single author, and has written two books. He developed the Q-system for classifying rock masses and was originator of the rock joint parameters JRC and JCS and of the Barton-Bandis laws for rock joint modelling. He has also developed the Q_{TBM} prognosis method, Q_{SLOPE} and Q_{H2O}.

Please join us afterwards for drinks sponsored by

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