



UC Berkeley

Geosystems Engineering

Wednesday Lecture Series

Wednesday, February 19, 2025

1:10-2:00 PM

Lecture Room: 406 Davis

CPT Interpretation in Residual (and Bonded) Soils

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Residual soils are common in many parts of the world with major structures such as mine waste facilities constructed over these soils. Residual soils retain some bonding from the parent rock and have a yield stress that is proportional to the bond strength. Residual soils often appear to have high shear strength due to the residual bonding. However, the behavior of residual soils is often poorly understood in geotechnical design. The Cone Penetration Test (CPT) is now commonly done in residual soils but interpretation is often poorly understood. This presentation will describe the basic behavior of residual soils and show example CPT data from various parts of the world. The behavior of residual soils can change under high overburden stresses from the construction of large embankments and this change in behavior is discussed and linked to recent failures.

