Unsaturated Soil Mechanics – Does Soil Really Suck?

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Abstract

Unsaturated soil is distinguished from saturated soil by the negative pore water pressures that develop. Unsaturated soil behavior and properties change significantly as the pore water pressures vary. In many instances, the changes that occur can be beneficial for engineering purposes if the soil does not become saturated and if the moisture conditions can be predicted correctly. Unsaturated soil mechanics includes measurement of unsaturated soils properties, analysis of unsaturated soil behavior and design for unsaturated soils. Fundamental concepts concerning mechanics of unsaturated soils are discussed in this presentation. Examples are provided for three classes of problems encountered by geotechnical engineers: fluid flow, shear strength and volume change. The emphasis of the presentation will be on the application of soil mechanics to unsaturated soils by geotechnical engineers.

***** Everyone is invited******
