Time & Location: April 2, 2020 at 2:30 PM in Virtual
Title: Compressibility of Fine-grained soil in Central Florida

Fine-grained soils are responsible for the majority of site settlements through a time dependent process known as consolidation. The magnitude of consolidation can be quantified with three terms: the recompression and compression indices, referred to as the soil's compressibility indices, and preconsolidation pressure. The ideal methods to estimate these parameters are direct measurements from lab. Other methods include estimation from engineering experience or from correlations to other soil parameters. This study refines the correlations between compressibility indices and index properties, particularly for soils in Central Florida. This study also suggests an initial correlation to CPT parameters as this test is commonly used and has the potential to create in-situ continuous and repeatable compressibility profiles. It was found that compressibility is strongly related to the CPT pore pressure reading for soils with pronounced colloidal properties. It was also found that the correlation to moisture content performed better than any other correlation for fine-grained soils in Central Florida.

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Approved for distribution by Boo Hyun Nam, Committee Chair, on March 23, 2020.

The public is welcome to attend.