Soil Parameters Identification around PMT Test by Inverse Analysis

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Abstract : This paper presents a methodology for identifying the cohesive soil parameters that takes into account different constitutive equations. The procedure, applied to identify the parameters of generalized Prager model associated to the Drucker & Prager failure criterion from a pressuremeter expansion curve, is based on an inverse analysis approach, which consists of minimizing the function representing the difference between the experimental curve and the simulated curve using a simplex algorithm. The model response on pressuremeter path and its identification from experimental data lead to the determination of the friction angle, the cohesion and the Young modulus. Some parameters effects on the simulated curves and stresses path around pressuremeter probe are presented. Comparisons between the parameters determined with the proposed method and those obtained by other means are also presented.