Deep excavation design methods – from allowable stress to load factored and resistance design

The design of deep excavations requires a careful consideration of soil and site conditions. The designer has to content with various analytical frameworks that may produce significantly different results. To complicate matters further, recent recommendations for load factored resistance design for earth retaining systems have the potential to produce very inconsistent results compared to the traditional allowable stress design method. This presentation covers the most common deep excavation design methods and also discusses the limitations of switching to load factored and resistance design for deep excavations.

Mr. Konstantakos is the CEO and founder of Deep Excavation LLC, and holds a Masters of Science degree from Massachusetts Institute of Technology and a Bachelor of Science from University of Massachusetts in Lowell. Mr. Konstantakos has considerable international involvement and experience. His areas of specialization are deep excavations, soil-structure interaction, slope stability, helical piles, and software development with relative publications. Mr. Konstantakos is the past chair of the ASCE-GI Earth Retaining Structures Committee, and the current technical committee council for all GI Technical Committees. Mr. Konstantakos has worked on many important international projects for slope stability, pile foundations, and braced excavations, including the World Trade Center recovery efforts in 2001. He holds professional licenses in New York and in Europe.

Interested in this presentation? Contact the ERS committee: Mr. Joel Dellaria or Dr. Anne Lemnitzer at jbdellaria@haywardbaker.com or alemnitz@uci.edu