



# 30<sup>th</sup> BUCHANAN LECTURE TEXAS A&M UNIVERSITY

October 20<sup>th</sup>, 2023

## *Geotechnical Engineering Marriage between Theory & Practice*

### Abstract :

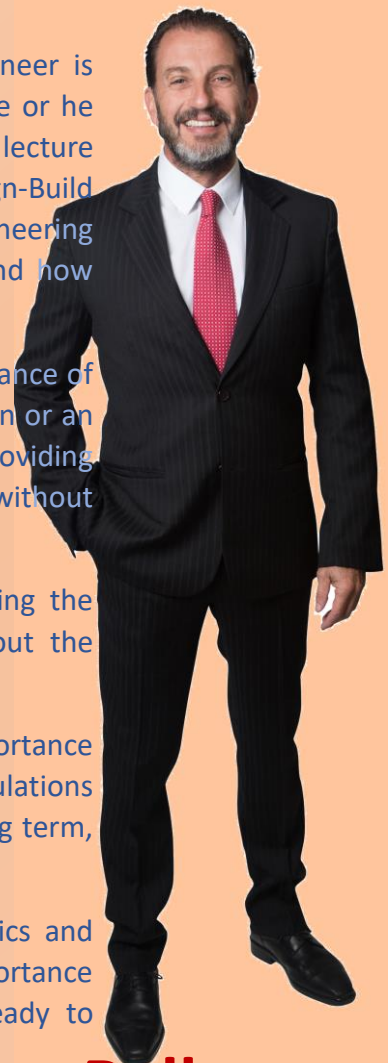
In practice, most projects are on fast track and the engineer is often pressured to give a solution quickly. In doing so, she or he could be taking a lot of risk and even facing danger. This lecture emanates from the long experience of the author in Design-Build solutions. It gives guidance on how to approach engineering problems in real life by combining theory and practice, and how they complement each other to give suitable solutions.

The SoLGeH approach is introduced, highlighting the importance of collecting data prior to giving any solution based on intuition or an answer haphazardly. A stable theoretical solution lies in providing functionality leading to a cost-effective execution without compromising safety.

Engineering is in our every day life; indeed, even analyzing the simple activity of walking on sand can tell us a lot about the interaction between theory and practice.

Six case histories will be presented, each exposing the importance of certain aspects in geotechnical engineering, such as, calculations using different theories/software, monitoring short and long term, site observation, and innovation.

As President of the International Society for Soil Mechanics and Geotechnical Engineering, the lecture also shows the importance to stay connected to the international family and be ready to practice and excel worldwide.



by **Dr. Marc Ballouz**

President of ISSMGE (2022-2026)