

土木及環境工程學系 DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING



SEMINAR

GEOTECHNICAL ENGINEERING MARRIAGE Between Theory & Practice

Speaker

Dr. Marc Ballouz

President of the International Society for Soil Mechanics and Geotechnical Engineering

Abstract

Iln 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 everyday 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.



Biography

Dr. Marc Ballouz is the current president of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMG). He is a highly accomplished geotechnical engineer with a Ph.D. in Geotechnical Engineering from Texas A&M University. Dr. Ballouz has extensive experience in the field of geotechnical engineering, having served as the President of the Institute for Geotechnics & Materials (IGM) since 1997. Under his leadership, IGM has completed over 150 projects in the USA, Lebanon, and Nigeria, and has provided consultancy services in many parts of the world. Dr. Ballouz's expertise lies in shoring deep excavations, deep foundations, underpinning & micropiling, landslides & ground stabilization, and forensic geotechnics. In addition to his professional experience, Dr. Ballouz has also been involved in academia. He has served as a Senior Lecturer at Texas State University and as an Assistant Professor at LAU, NDU, and LU in Lebanon. He has also been an invited lecturer at UT, TAMU, and UMich in the USA and a keynote lecturer at major conferences worldwide. Dr. Ballouz has won numerous awards throughout his career, including the Buchanan Lecturer Award in 2023, the PRC Award from ISSMGE Paris in 2013, and two medals from the Sheriff & Fire Department in Harris County in 2017. He has also published over 100 professional design reports and forensic remediation reports, as well as six ASCE papers, six research reports, two magazine articles, and an ISSMGE video.



12 December 2023 Tuesday



4:00 pm - 5:30 pm



Civil Engineering Conference Room Room 3574 (Lift 27/28) HKUST

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