

**UNIVERSITY OF MACAU
FACULTY OF SCIENCE AND TECHNOLOGY
DEPARTMENT of CIVIL & ENVIRONMENTAL
ENGINEERING**

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**“Geotechnical Testing/Monitoring –
Devils in the Details”**

by

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Time: 11:00am - 12:30pm

Venue: N204, University of Macau

Language: English

Abstract

Geotechnical testing, either in field or laboratory scale, is the most direct way to understand the response of a geotechnical system. Herein a geotechnical system can be as simple as a soil specimen confined in rigid walls (for instance oedometer cell) or as complex as the construction of twin tunnels adjacent to existing piles. Monitoring is of prime importance during the testing. Over the decades, owing to the advances in technologies, monitoring has been evolved from simply naked eyes, to mechanical sensing, and further to mechanical-electrical coupled ones. Unfortunately, the more powerful the sensors the more common that users treat them as a black-box.

In this presentation, very common geotechnical tests are used to illustrate the devilish details of geotechnical testing. Important aspects regarding

geotechnical testing are discussed, such as testing limitations, sensor calibration, data acquisition and data interpretation. The talk is suitable for not only research students working in civil engineering but also undergraduates in the discipline.

Biography

Dr. Ryan Yan is currently an Assistant Professor in the Department of Civil Engineering at the University of Hong Kong (HKU). Prior to joining HKU, he had been a Research Fellow, Visiting Scholar, and Assistant Professor at HKUST, Technical University of Hamburg-Harburg, Germany and the University of Macau for more than six years. He has been awarded for more than 4 millions Hong Kong dollars research funding over the years and has published more than 30 technical research papers in various international journals and conference proceedings. His current research interests include constitutive and numerical modelling of geomaterials, advanced nondestructive soil characterization and geotechnical process monitoring, application of Bayesian analysis to geotechnical engineering, soil-structure interaction as well as field monitoring. He serves as the Committee Member in a number of engineering societies in Hong Kong, including the HKIE Geotechnical Division, ASCE (Hong Kong Section), The Association of Geotechnical and Geoenvironmental Specialists (Hong Kong), and The Hong Kong Society of Theoretical and Applied Mechanics.

ALL ARE WELCOME!