

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

Ref: FST/SEM/00031/2016

**" Analysis on Unloading Nonlinear Mechanics
Characteristic of Rock Mass and Its
Application to Engineering "**

by

[Prof. Yi-sheng HUANG](#)

*Associate Professor, College of Hydraulic & Environmental Engineering,
China Three Gorges University, China*

Date: 29/03/2016 (TUESDAY)

Time: 10:00AM – 11:00AM

Venue: E11 – 1006

Abstract

The quality of rock mass which includes structure planes such as joints and cracks deteriorates rapidly under the unloading condition. Based on high slope of permanent ship lock in Three Gorges Project, the concept of unloading rock mass mechanics has been hereby put forward. Although the research in unloading rock mass mechanics has made great progress, some questions still should be studied further due to the complexity of the unloading condition, especially unloading nonlinear mechanical characteristic of rock mass. In the presentation, unloading nonlinear mechanical characteristic of rock mass including equivalent area parabola Drucker-Prager criterion, hyperbola nonlinear elastic constitutive relationship, equivalent anchoring mechanics parameter and physical simulation test for anchoring rock mass will be presented and discussed. At the end, its application to engineering will be introduced and discussed.

Biography

Yi-sheng Huang, PhD, Associate Professor of College of Hydraulic & Environmental Engineering, China Three Gorges University (CTGU). He obtained his Bachelor Degree in hydraulic engineering at CTGU in 2000. Following that, he earned his Master Degree and PhD degree in hydraulic engineering at Wuhan University in 2003 and 2007, respectively. He joined in CTGU in July 2007 under the high level talents introducing plan of CTGU and now is the department head of Department of Engineering Mechanics, College of Hydraulic & Environmental Engineering, CTGU. He has broad research interests in geotechnical engineering, including constitutive modeling of geomaterials, numerical analysis of geotechnical problems, laboratory and physical model tests and so on. He is currently working on unloading rock mass mechanics and landslide mechanics characteristic analysis. He has published more than 20 journal and conference papers so far. He has obtained many profession awards too.

ALL ARE WELCOME!