

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

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**Application of optical fiber sensor
technology in geotechnical engineering
projects**

By

Dr. Cheng-Yu Hong

Associate Professor

Department of Civil Engineering

Shantou University

Date : 11/10/2013 (Friday)

Time : 15:00 – 16:00

Venue : N402

Abstract

The talk will cover the following contents: 1. Optical fiber sensor technology-sensor types and sensing principle; 2. Why we use optical fiber sensor technologies in geotechnical engineering projects; 3. How to realize the monitoring work of geotechnical engineering projects using optical fiber sensor technologies; 4. Installation experiences of different optical fiber sensors in different geotechnical engineering projects; 5. Typical monitoring test results and analysis; 6. Current problems of optical fiber sensor for the monitoring work of geotechnical engineering projects; 7. Conclusions.

About the Speaker

Dr Cheng-Yu Hong (洪成雨) is currently an associate professor in Department of Civil Engineering of Shantou University. He received a BSc and an MSc in mainland China and a PhD from The Hong Kong Polytechnic University in Oct 2011. After worked as a research associate in The Hong Kong Polytechnic University for one year, Dr Hong joined Shantou University in 2012.

Currently Dr Hong has published 10 international journal papers and 13 conference papers. He also served as reviewers for two international journals: ASCE International journal of Geomechanics and ICE Geoenvironmental Geotechnics. His research concerns involve pullout resistance of pressure grouted soil nails; long-term monitoring of conventional soil nails and GFRP bar soil nails, and application of different optical fiber sensor technologies (fiber Bragg grating sensor; Low Coherence Interferometry; Brillouin Optical Time Domain Analysis) in geotechnical engineering projects.

ALL ARE WELCOME!