EVENT OBJECTIVES

- Obtain a comprehensive overview to Structural Health Monitoring
- Gain updates on Fiber Optic Sensing technologies that will be applicable to your assets
- Appreciate SHM capabilities through demonstration of SOFO and MuST sensors
- Learn the various sensor types available for SHM processes and their interpretation of measurement
- Understand further into sensor topologies and global structural monitoring
- Learn more into data analysis through real-world case studies
- Obtain insights to how integrity monitoring is being conducted globally
- Look into how defects are being detected through SHM processes
- Attain practical learning through various real-world case studies being featured in the class

DON’T MISS!

Be part of the SHM community and anticipate intensive discussion on the following real-world case studies!

- New I35W Minneapolis Bridge, USA
- Halifax Metro Centre, Canada
- High-rise building Punggol East C26 and Pinnacle©Duxton, Singapore
- Semiconductor facility pilings testing, Taiwan
- Streicker Bridge, Princeton, USA and NJ23/US202 overpass, Wayne, NJ, USA
- Concrete pipeline full scale testing, USA
- Fatigue cracking monitoring of Gota Bridge, Sweden
- Sinkhole detection and localization in Kansas, USA
- Dam and levee monitoring examples
- Tunnel monitoring examples
- Pipeline leakage detection examples
- The Shinkansen High Speed Rail

Please refer to page 2 for course details!

WHO SHOULD ATTEND

Civil engineers, practitioners, consultants, contractors, infrastructure managers, project owners, researchers and students working on projects in oil and gas platforms, pipelines, tunnels, building and construction, dams, bridges, expressways and other critical infrastructures will benefit from the workshop.

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Registration and coffee starts at 8:30am daily. The event begins at 0900 sharp and ends at 1600. Lunch and refreshments will be provided for all attendees during the 2-day event.

**DAY 1 PROGRAM**

**Introduction to Structural Health Monitoring**
- Motivation, aims, benefits, SHM process

**Overview of Fiber Optic Sensing technologies**
- Monitoring systems, discrete FOS, distributed FOS

**Demonstration of SOFO and MuST sensors**

**Monitoring projects – Examples from practice**
- New I35W Minneapolis Bridge, USA
- Halifax Metro Centre, Canada

**Sensors types and interpretation of measurement**
- Strain analysis; dependence of measurement on gauge-length

**Sensor topologies and global structural monitoring**
- Simple, parallel, crossed, and triangular topology

**Distributed Optical fiber sensors for stability analysis and leakage detection**

**DAY 2 PROGRAM**

**Global structural monitoring**
- Data analysis examples from practice
- Case studies used for discussion include:
  - High-rise building Punggol East C26, Singapore
  - Pinnacle@Duxton Complex, Singapore
  - Semiconductor facility piles testing, Taiwan
  - Streicker Bridge, Princeton, USA and NJ23/US202 overpass, Wayne, NJ, USA

**Integrity monitoring – examples from practice**
- Concrete pipeline full scale testing, USA
- Fatigue cracking monitoring of Gota Bridge, Sweden
- Streicker Bridge, Princeton, USA (Updated)

**Global monitoring and defect localization – examples from practice**
- Sinkhole detection and localization in Kansas, USA
- Dam and levee monitoring examples
- Tunnel monitoring examples
- Pipeline leakage detection examples

**Smart sensing systems**
- Introduction of smart wireless sensor
  - GPS-based remote optical monitoring system for structural inspection
  - UAV application as Innovative Inspection Technique at Asa Bridge, Japan
  - Structural monitoring for High Speed Rail System
  - Case Study in discussion: The Shinkansen High Speed Rail

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REGISTRATION FORM

STRUCTURAL HEALTH MONITORING

26 - 27 May 2014
HDB Centre of Building Research, Singapore

TRAINING COURSE PRICES

My registration code is: DTS-02

INDIVIDUAL REGISTRATION (Standard Price)

☐ Individual $550

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