

# Short Course on Design & Construction of Tunnels & Underground Structures



## COURSE OBJECTIVES

The purpose of this short course is to provide a comprehensive background to design and construction of tunnel and underground structures. It is aimed at those who are involved in as well as provide support services to the tunnelling and underground construction industry, including government agencies, clients, consultants, contractors and insurance sector.

Training and continued education is critically important for engineers and allied professionals working in the construction industry. This is particularly so in the field of tunnelling and underground works, which is fast-changing but operating in a high-risk environment. This is a course that all professionals operating in the tunnelling industry should attend at some time, irrespective of the current stage of their career.

## WHO SHOULD ATTEND

This course is curated to cater for those who wish to widen their knowledge in the design and construction of tunnels and underground structures. It is most suited for engineers in civil engineering construction and consultancy sectors as well as resident engineers and technical officers engaged in tunnelling and underground works. It is also highly suitable to representatives from client organisations or government agencies or those from the insurance sector, who have a need to understand tunnelling technology or engineering best practices in the underground works.

## REGISTRATION FEES

To Register: [Click here](#)

TUCSS Members	\$420
Non-members	\$520

\*Corporate members may nominate up to 2 staff at member's rate.



**Orchard Hotel**  
**4 – 5 April 2019**  
**PDU: 12**  
**STU : 12 (Structural)**

For more information, please contact:

TUCSS Secretariat @ 1 Liang Seah Street #02-11 Liang Seah Place Singapore 189022  
Tel: 6336 2328 Fax: 6336 2583 Email: [tucss@cma.sg](mailto:tucss@cma.sg) Website: [www.tucss.org.sg](http://www.tucss.org.sg)

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## Programme for 4 April 2019

8.30am	Registration
9.00am	<b>Opening Address</b> by <i>Jeyatharan Kumarasamy, TUCSS President</i>
9.10am	<b>Steel Fibre Reinforced Segmental Linings for Large Diameter Tunnels</b> by <i>Tom Ireland, Aurecon</i>
10.00am	<b>Quality Control &amp; Workmanship to achieve 120 Years Design Life of Underground Structures</b> by <i>Charles Allen, Arup</i>
10.45am	<b>Morning Teabreak</b>
11.15am	<b>Supervision &amp; Quality Control in Ground Improvement Works</b> by <i>Vallipuram Ganeshan, AECOM</i>
12.00pm	<b>Rock Engineering &amp; Rock Tunnelling in Singapore</b> by <i>Dr Zhou Yingxin, DSTA</i>
12.45pm	<b>Lunch</b>
2.00pm	<b>Challenges &amp; Lessons Learnt in TBM Tunnelling</b> by <i>Gusztav Klados, Gamuda</i>
2.45pm	<b>Challenges in Excavation Management for Slurry TBMs</b> by <i>Jim Yee, Land Transport Authority</i>
3.30pm	<b>Afternoon Teabreak</b>
4.00pm	<b>Water Seepage and Control Measures in Deep Excavation Works</b> by <i>Veeresh Chepurthy, Land Transport Authority</i>
4:45pm	<b>Supervision for Better Quality Ring Build &amp; Grouting</b> by <i>Richard Siew, Ronnie &amp; Koh Consultants Pte Ltd</i>
5:30pm	<b>End of 1st Day</b>

## Programme for 5 April 2019

8.30am	Registration
9.00am	<b>Challenges in Planning and Execution of Major Underground Infrastructure Projects in Singapore</b> by <i>Paul Fok, Land Transport Authority</i>
9.45am	<b>Improving Productivity in Tunnelling</b> by <i>Guy Taylor, John Holland</i>
10.30am	<b>Morning Teabreak</b>
11.00am	<b>Good Practices in the Construction of Secondary Lining of Tunnels &amp; Shafts</b> by <i>Charles Allen, Arup</i>
11.45am	<b>Challenges &amp; Lessons Learnt in Cross Passages &amp; Sumps Construction</b> by <i>Oskar Sigl, Geoconsult</i>
12.30pm	<b>Lunch</b>
1.45pm	<b>Complacency in the Design of Underground Works</b> by <i>Colin Bullock, Meinhardt Infrastructure</i>
2.30pm	<b>Planning and Execution of Compressed Air Works</b> by <i>Darren Brunton, KB Associates</i>
3.15pm	<b>Afternoon Teabreak</b>
4.00pm	<b>Quality Control and Supervision of Diaphragm Wall Construction</b> By <i>Chandrasegaran Sundararaju, Bachy Soletanche</i>
4.45pm	<b>Logistic &amp; Organisation for a Better Tunnelling Site</b> by <i>Stephane Ferber, Herrenknecht</i>
5.30pm	<b>End of Short Course &amp; Certificate Collection</b>

\*Programme is subject to changes

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