

Organised by
TUNNELLING AND UNDERGROUND SPACE
TECHNICAL DIVISION (TUSTD)



HYBRID HALF DAY SEMINAR ON “DETECTION AND SCANNING WORKS UNDERGROUND DEVELOPMENT”

27 AUGUST 2024 (TUESDAY)
8.30 AM – 1.30 PM

HYBRID (PHYSICAL + ONLINE EVENT)
PHYSICAL VENUE – MALAKOFF AUDITORIUM,
BEM APPROVED CPD: 4.0
REF NO : IEM24/HQ/222/S

CLOSING DATE: 22 AUG 2024

PROGRAMME

TIME	PROGRAMME
08:30am – 09:00am	Registration of Participants, Welcome Breakfast at D’Place, Ground Floor, Wisma IEM
09:00am – 09:05am	Welcoming Speech by TUSTD Representative
09:05am – 10:35am	Part 1: Utilities Mapping Implication for Major Underground Development Construction
10.35am - 11.05am	Q&A Session
11:05am– 11.15am	Morning Coffee Break
11:15am– 12:45pm	Part 2: The Rapid 3D LiDaR Technology for Tunnel Surveying, Mapping & Inspection
12.45pm - 1.15 pm	Q&A Session
1.15pm - 1.20pm	Closing Remarks by TUSTD Representative
1.20pm - 1.30pm	Lunch / End of Programme

“IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion’.
IEM SHALL NOT be responsible for any direct or consequential losses”.

For further details, kindly contact:

The Institution of Engineers, Malaysia

Bangunan Ingenieur, Lots 60/62, Jalan 52/4, P.O. Box 223 (Jalan Sultan), 46720 Petaling Jaya, Selangor

Tel: 603-7968 4001/2 Fax : 603-7957 7678

Email : shahrul@iem.org.my / syafiq@iem.org.my



Part 1: Utilities Mapping Implication for Major Underground Development Construction

The accuracy of subsurface utility as-built and alignment drawings has long been a persistent issue within our construction industry. Currently, extensive trial hole works are necessary to map subsurface utilities for feasibility studies and fact-finding purposes. However, these trial holes are costly to excavate and only provide information about the specific location where they are dug.

Could we consider an alternative approach? The focus here is on adapting Subsurface Utility Mapping (SUM) with non-destructive geophysical methods such as Ground Penetrating Radar (GPR) to generate Geo-located Utilities Drawings (GUD).

This presentation will be delivered by HSC Pipeline Engineering (HSC). As a utility contractor, HSC benefits from the ability to perform extensive GPR scans and subsequently validate these scans during the pipelaying process. To-date, HSC has conducted GPR scans covering over 1.6 million m² of road and turf around Singapore.

This vast experience has allowed HSC to develop a strong understanding and expertise in utilising GPR technologies within Singapore's ground conditions. Being both a contractor and an end-user of GPR, this talk will cover the practical experiences, highlighting the limitations and significant benefits that GPR brings to the construction industry.



Speaker 1 : Mr. Shane Shi

Mr. Shane Shi (Managing Director), from HSC Pipeline Engineering Pte Ltd. HSC is a local Medium Enterprise with 30 years of expertise on underground utility projects. Shane leads various digitalisation initiatives within HSC, encompassing departments such as Human Resources, Procurement, Finance, Safety and Operations. Through the use of new and available technology, Shane leads a team in implementing Subsurface Utilities Mapping to enhance project productivity and efficiency, delivering value-added solutions to HSC's clientele

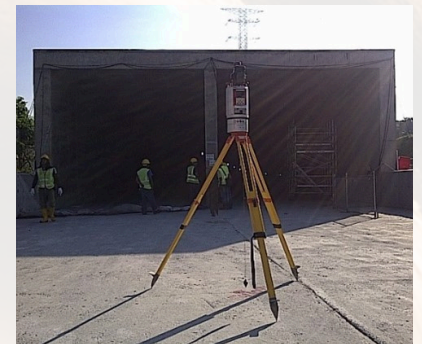
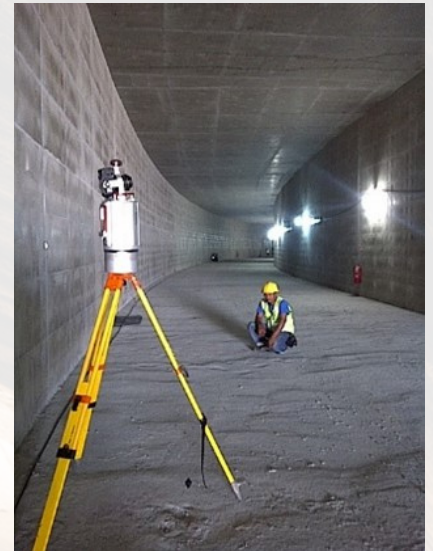


Speaker 2: Mr. Shawn Seah

Mr. Shawn Seah (Deputy General Manager), from HSC Pipeline Engineering Pte Ltd. Shawn has over 20 years' experiences in underground infrastructure development including metro lines, cable tunnels, caverns and utilities. The involvement in various roles within the underground works industry have provided an understanding of its dynamics and complexities. Currently, Shawn is dedicated to the advancement of underground detection and mapping technologies, with a keen focus on driving safety, efficiency, and sustainability initiatives.

Part 2: The Rapid 3D LiDaR Technology for Tunnel Surveying, Mapping & Inspection

Light Detection and Ranging (LiDAR) technology is a cutting-edge method used for detailed surveying and mapping of tunnel environments. By emitting laser pulses and measuring the time it takes for them to return after hitting surfaces, LiDAR generates precise, three-dimensional models of tunnel interiors. This technology is crucial for various applications in tunnel construction, maintenance, and safety monitoring. LiDAR technology especially terrestrial laser scanning can be used to identify and track deformations, cracks, and subsidence over time. LiDAR surveying ensures the tunnel is built according to design specifications by detecting deviations early. LiDAR can provide accurate records of tunnel conditions for reference in maintenance and future projects. The presentation aims to show the LiDAR scanning technology using various LiDAR equipment and how to use LiDAR during tunnel construction, maintenance, and safety monitoring.



Speaker:

Gs. Anomaht Aitin currently a Director of AXIS Gemilang Sdn. Bhd. - Geospatialist and LiDAR Consultant with more than 23 years' experience in Geospatial Industry. He is a certified LiDAR trainer and for the last 12 years, Anomaht and team has been mainly engaged in LiDAR surveying and mapping for various projects and client's including MRT tunnel scanning using terrestrial laser scanner (TLS) and menora tunnel scanning using mobile laser scanner (MLS).



REGISTRATION FORM

HYBRID HALF DAY SEMINAR ON "DETECTION AND SCANNING WORKS UNDERGROUND DEVELOPMENT"

27 AUG 2024 (TUESDAY) **CLOSING DATE : 22 AUG 2024**

Email : shahrul@iem.org.my / syafiq@iem.org.my

HYBRID Fees Platform		
	ONLINE FEE ATTENDANCE (RM)	PHYSICAL FEE ATTENDANCE (RM) -
IEM Student Members	40.00	100.00
IEM Graduate Members	75.00	180.00
IEM Corporate Members	120.00	300.00
Non-IEM Members (Non of the Above)	240.00	500.00

NAME	MEMBERSHIP NO. / GRADE	FEES (RM)
		Sub Total:
		SST Added 8% :
		Total Amount Payable :

PAYMENT DETAILS :

Cash RM _____

Cheque no. _____ for the amount of RM _____ (non-refundable) .

FULL PAYMENT must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non refundable. The Registration Fee includes lecture notes, refreshment and lunch.

For **ONLINE REGISTRATIONS**, please note that payment **MUST** be made **BEFORE the closing date**. If payment is not received within the stipulated time, the registration fee will be reverted to the normal registration fee.

Contact Person: _____ Designation: _____

Name of Organization: _____

Address : _____

Telephone No. : _____ (O) _____ (Fax No.)

_____ (H) _____ (HP)

Email : _____

Signature & Stamp

Date

ADVERTISEMENT BOOKING FORM (EVENT BOOKLET)

Hybrid Half Day Seminar on “Detection and Scanning Works Underground Development” 27 August 2024 (Tuesday)

Organised by : Tunneling and Underground Space Technical Division (TUSTD), The Institution of Engineers, Malaysia No. 60/62, Jalan 52/4, P.O. Box 223 (Jalan Sultan), 46720 Petaling Jaya, Selangor
Tel No. 03-78900135 /134 Email: shahrul@iem.org.my / syafiq@iem.org.my
Website : www.iem.org.my

Chairman, Tunneling and Underground Space Technical Division (TUSTD),

We would like to place an advertisement in the EVENT BOOKLET of the **HYBRID HALF DAY SEMINAR (27 August 2024)** as indicated below and attach herewith a cheque no. for the sum of RMmade payable to “THE INSTITUTION OF ENGINEERS, MALAYSIA” being our booking fees:-

PLEASE TICK (√) IN THE APPROPRIATE BOXES BELOW (ALL SUBJECT TO 8% SST):

Tick	Location	Advertisement Rates (RM)	Complimentary Participant Seat
	Outside Back Page (Colour)	RM 6,000.00	3 Seats
	Inside Front Page (Colour)	RM 4,500.00	2 Seats
	Inside Back Page (Colour)	RM 4,500.00	2 Seats
	Inside Run of Page (Colour)	RM 2,500.00	1 Seat
For special packages, kindly indicate items agreed as below:-			

****Advertisement Artwork must be accompanied with payment minimum 1 week before printing.***

PAYMENT INFORMATION:

- Account Name : THE INSTITUTION OF ENGINEERS, MALAYSIA**
- Account Number : 232-303-911-0**
- Bank Name : UNITED OVERSEAS BANK (UOB)**
- Bank Address : NO 2-6, JALAN TENGAH, 46200 PETALING JAYA, SELANGOR**
- Swift Code : UOVBYK1025**
- Email Address for Receiving Remittance Advise : finance@iem.org.my/shahrul@iem.org.my**

CONTACT INFORMATION:

CONTACT INFORMATION:		
Contact Name		
Organisation:		
Position:		
Mailing Address:		
Contact Nos.:	Tel:	Fax:
Hand phone No.		
E-mail:		

Signature: _____

Date: _____

Company Stamp: