



HYBRID HALF DAY SEMINAR ON “DESIGN AND INNOVATION OF STRUCTURAL FIRE RESISTANCE FOR TUNNEL AND UNDERGROUND STRUCTURE”

**19TH FEBRUARY 2025 (WEDNESDAY)
8.30AM - 1.30PM**

- HYBRID (PHYSICAL + ONLINE EVENT)
- PHYSICAL VENUE - MALAKOFF AUDITORIUM,
- BEM APPROVED CPD: 4.0
- REF NO : IEM25/HQ/040/S (H)

CLOSING DATE: 14 FEB 2025

PROGRAMME

TIME	PROGRAMME
08:30am – 09:00am	Registration of Participants, Welcome Breakfast at D'Place, Ground Floor, Wisma IEM
09:00am – 09:05am	Welcoming Address and Introduction by IEM TUSTD Representative
09:05am – 10:35am	Part 1: Title: “UNDERSTANDING FIRE DAMAGE TO TUNNEL LINING STRUCTURE” Speaker: Prof. Ts. Dr. Roszilah Hamid & Ir. Dr. Noor Azim Mohd Radzi, Universiti Kebangsaan Malaysia
10.35am - 11.05am	Q&A Session
11:05am– 11.15am	Morning Coffee Break
11:15am– 12:45pm	Part 2: Title: FIRE RESISTANCE MATERIALS FOR TUNNEL LINING STRUCTURES” Speaker: Prof. Ts. Dr. Roszilah Hamid & Ir. Dr. Noor Azim Mohd Radzi, Universiti Kebangsaan Malaysia
12.45pm - 1.15 pm	Q&A Session
1.15pm - 1.20pm	Closing Remarks by IEM 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: 603-7890 0134

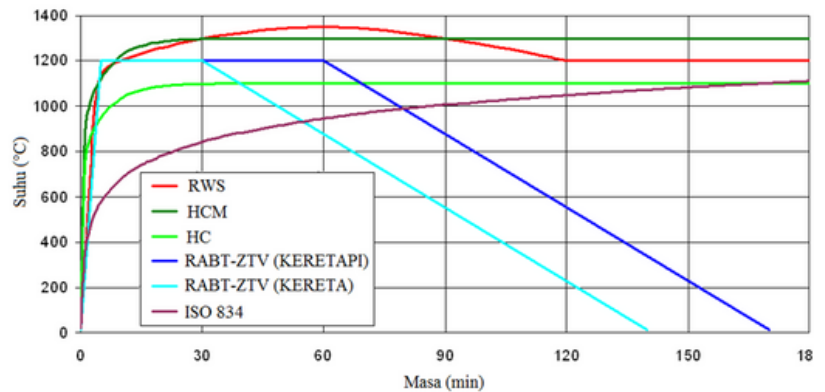
Email : shahrul@iem.org.my / syafiq@iem.org.my

Part 1: UNDERSTANDING FIRE DAMAGE TO TUNNEL LINING STRUCTURE”

This talk will focus on understanding the effects of fire damage on tunnel lining structures, particularly how high temperatures impact concrete and steel reinforcement. It will explore key issues such as concrete spalling, loss of strength, and the degradation of materials during fire exposure. The talk will also cover methods used to assess fire resistance in tunnel linings, including thermal testing and simulations, to better understand how temperature distribution and moisture content affect the structure’s integrity. This session is designed to provide valuable insights for engineers and professionals working to enhance the fire safety and durability of tunnel infrastructure.



Fire incident in the Mont Blanc tunnel in 1999
Source: Kaundinya 2007



Temperature-time curve of tunnel fire
Source: EFNARC 2006



Large-scale fire process
Source: Ingason et al. 2015



Speaker 1: Prof. Ts. Dr. Roszilah Hamid

ROSZILAH HAMID, PhD, Professor and Chair at the Department of Civil Engineering, FKAB UKM, and a registered member of the American Concrete Institute (ACI). Her area of expertise is concrete technology and non-destructive testing of concrete structures.

Part 2: FIRE RESISTANCE MATERIALS FOR TUNNEL LINING STRUCTURES”

The increasing frequency of fires in buildings, factories, tunnels, and chemical and gas facilities highlights the growing need to understand the fire resistance of concrete structures exposed to high temperatures. This talk focuses on the development of new fire-resistant materials, specifically High-Strength Fly Ash and Nano Silica Concrete, designed to withstand temperatures exceeding 1000°C. The session will cover advanced technologies used to assess the performance of these materials, including furnace heating, thermal conductivity testing, and finite element simulations. These new materials offer promising solutions for enhancing the fire resistance and safety of tunnel lining structures, making them more resilient to extreme fire conditions.



Large scale fire test in SIRIM
Source: Radzi 2016



Burning process: (a) small-scale laboratory and (b) small-scale portable
Source: Yan et al. 2013 and Vermeer et al. 2014



Speaker 2: Ir. Dr. Noor Azim Mohd Radzi

NOOR AZIM MOHD RADZI, PhD, Senior Lecturer at the Department of Civil Engineering, Faculty of Engineering and Built Environment (FKAB), Universiti Kebangsaan Malaysia (UKM), and a qualified professional engineer. His area of expertise is pre-stressed concrete structures, post-tensioned concrete structures, and structural fire engineering

REGISTRATION FORM

HYBRID HALF DAY SEMINAR ON

“DESIGN AND INNOVATION OF STRUCTURAL FIRE RESISTANCE FOR TUNNEL AND UNDERGROUND STRUCTURE”

19 Feb 2025 (Wednesday) **Closing Date : 14 Feb 2025**

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

HYBRID Fees Platform

	ONLINE PARTICIPANTS FEE (Log-in for registration & payment: www.myiem.org.my/member/login.aspx)	PHYSICAL PARTICIPANTS FEE (Log-in for registration & payment: www.myiem.org.my/member/login.aspx)
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 “DESIGN AND INNOVATION OF STRUCTURAL FIRE RESISTANCE FOR TUNNEL AND UNDERGROUND STRUCTURE”

19 February 2025 (Wednesday)

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 (19 Feb 2025)** 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 Name		
Organisation:		
Position:		
Mailing Address:		
Contact Nos.:	Tel:	Fax:
Hand phone No.		
E-mail:		

Signature: _____

Date: _____

Company Stamp: