

# 2ND MUSTAFA AHMAD MEMORIAL LUNCHEON LECTURE ON EMBANKMENTS TRANSITIONING TO BRIDGES AND OTHER RIGID STRUCTURES

By



## Ir. DR TOH CHENG TEIK

Venue:

**ARMADA HOTEL,  
PETALING JAYA**

Date

**19 OCTOBER 2024,  
SATURDAY**

Time:

**10.00AM - 2.30PM**

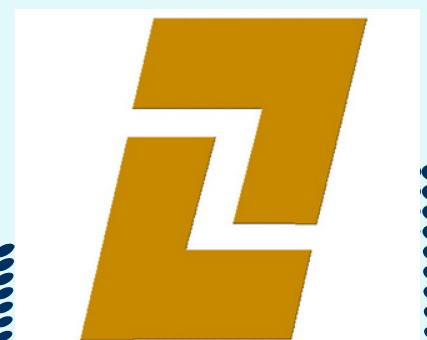
BANQUET STYLE  
DINING LUNCHEON

BEM APPROVED CPD: 2  
REF. NO.: IEM24/HQ/363/L

REGISTRATION FEE (SUBJECT TO 8% SST)

ITEM	FEE (VIA IEM WEBSITE)
IEM Member (1 Seat)	RM 150.00
Non IEM Member (1 Seat)	RM 180.00
1 Table (10 Seats)	RM 1300.00

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# Synopsis

The intention of a transition embankment is to provide a smooth riding quality from that part of the road that is subject to long term settlement and the pile embankment leading up to the bridge or the bridge abutment. Abrupt change in settlement is also a safety hazard.

Going back 40 years, closely spaced bakau piles groups of different lengths, though imperfect were nonetheless fairly successfully used for transition embankment. Bakau piles have since been banned from use for environmental protection reasons. Transition embankments subsequently took various forms including reinforced concrete piles in groups of different lengths and at wider spacings (than bakau piles), stone columns, etc together with hinged slabs, or geosynthetics. Much of present approaches have not performed as well.

The following will be presented in this lecture:

- (i) Difficulties in estimating consolidation settlement to the accuracy required for a transition design;
- (ii) Difficulties in accurately estimating pile group settlement more so when fill has penetrated significantly into the soft clays;
- (iii) Difficulties with estimating long term settlements of stone columns ;
- (iv) Controlling weight of embankment instead of attempting to improve the soft soils offers the best approach that is also easiest to design;
- (v) Methods for reducing the differential settlement in the event of failed transition design.

The lecture will also show, by case histories and numerical analyses the lesser known problem of lateral movements of the soft clay at the end of the pile embankment affecting the adjacent piles; these effects are not reduced by increasing the extent of the pile embankments.

Specifications for design of a transition has to be realistic. The lecture will draw attention to the absurdity of present criteria commonly adopted by authorities.

# Tentative Programme

Time	Description
10.00 am - 10.15 am	Registration ( All participants seated by 10.15am )
10.15 am - 10.25 am	Opening Remarks by Organising Chairman
10.25am – 10.40am	Speech by IEM President, Ir. Prof. Dr. Jeffrey Chiang Choong Luin
10.40am – 12.45pm	Lecture by Ir. Dr C.T. Toh
12.45pm – 2.30pm	Networking Lunch

## Registration form

No	Name (s)	M'Ship Number	IC No.	Fee (RM)
SUB TOTAL				
ADD SST @8%				
TOTAL PAYABLE				

\*Fees MUST be fully paid BEFORE the CLOSING DATE. Seats could only be confirmed upon payment.

Enclosed herewith a crossed cheque No: \_\_\_\_\_ for the sum of RM \_\_\_\_\_ issued in favour of “The Institution of Engineers, Malaysia” and crossed ‘A/C payee only’. I/We understand that the fee is not refundable if I/We withdraw after my/our application is accepted by the Organising Committee as stated in the cancellation term. If I/We fail to attend the seminar, the paid registration fee will not be refunded.

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# Speaker's Profile



## Ir. Dr Toh Cheng Teik

Ir. Dr C.T Toh is currently a Director at Dr. Toh Associates Sdn Bhd. He has been practicing geotechnical engineering for 46 years. He graduated from Monash University in 1974 with the degree Bachelor of Civil Engineering and was subsequently awarded a Doctorate from the same university in 1979.

His experience covers foundations, soil treatment, slope stabilization, basement construction etc. in alluvial and marine deposits, peat, residual soils and rocks.

He authored the LLM Report on Trial Embankments in Muar in 1989 and was a major contributor to the CIDB Guidelines for construction of peat and Organic soils in 2015. Recently he co-authored with his colleagues several papers on a data based approach to design of bored piles; the data from more than 100 instrumented test piles.

# Sponsorship for the next Memorial Luncheon

Package	Amount (RM)	Entitlement	Complimentary Seats
Main Sponsor*	RM20,000	<ul style="list-style-type: none"> <li>- Company corporate logo will be displayed throughout the symposium &amp; exhibition promotional flyers &amp; advertisement</li> <li>-1 page advertisement (inside page colour) in programme booklet</li> <li>-Company logo on stage backdrop</li> <li>-Acknowledgement of the company during symposium &amp; exhibition opening ceremony</li> <li>-Brief intro about company / top management in programme booklet**</li> </ul>	10
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