

## Technical Talk on Performance of Composite Buttress and Cross Walls to Control Deformations Induced by Excavation”

(Organised by Geotechnical Engineering, Technical Division, IEM)

Ref Number: IEM18/HQ/454/T BEM Approved CPD/PDP Hours: 2

Date : 1<sup>st</sup> November 2018 (Thursday)  
Time : 5.30pm – 7.30pm (Refreshments will be served at 4.45pm)  
Venue : Tan Sri Prof. Chin Fung Kee Auditorium, Third Floor, Wisma IEM, PJ  
Speaker : Professor Chang- Yu Ou

### SYNOPSIS

Cross wall is a wall connecting the opposing two retaining walls before excavation is started. It can be constructed using jet grouting methods. To obtain a better construction quality, the cross wall can also be constructed by using concrete diaphragm walls. Cross walls can reduce the wall deflection and ground settlement to a very small amount but it is expensive especially in wide excavations. Buttress walls are constructed in a way similar to cross walls but with limited length. The effect of buttress walls in reducing the wall deflection or ground settlement is less than those from cross walls. Combination of cross walls and buttress walls is another alternative, which can be beneficial to the construction cost and simultaneously give a good control of ground settlement. This talk will present the performance cross walls, buttress walls, and composite buttress and cross wall.

### SPEAKER'S BIODATA

Professor Ou obtained his Bachelor Degree in Civil Engineering from National Cheng Kung University, Taiwan in 1977 and Doctor of Philosophy (PhD) in Civil Engineering from Stanford University in 1987. His main research interests are on Deep Excavation, Soil Behavior, Constitutive model, Electro-osmotic Chemical Soil Improvement, and Shield tunnelling. Prof. Ou had been a professor at Department of Construction Engineering, National Taiwan University of Science and Technology from 1994 until 2001. Besides that, he was also a dean at the College of Engineering, National Taiwan University of Science and Technology from 2004 until 2010. Now, he is a Chair Professor at Department of Civil and Construction Engineering, National Taiwan University of Science and Technology.

**Ir. Lee Peir Tien**

**Chairman, Geotechnical Engineering Technical Division, IEM**

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