

SAFETY REQUIREMENTS AND CHALLENGES ON IMPLEMENTATION OF SAFE MEASURES IN DEEP EXCAVATION PROJECTS

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Safety for deep excavation is a highly sensitive requirement which demands competent professionals (Designers, Engineers, Supervisors, Safety & ECMO) for implementations and enforcement in the construction activities.

When it comes to excavations for major projects, particularly in densely developed urban areas, there are more options than just the conventional bottom-up building approach. While just about every major construction project involves digging large holes in the ground, the methods of excavation can have a significant impact on timeframes and costs. The good practices should comprise of innovative solutions to challenges faced on most sites, as well as improved work procedures that enhance safety and environmental performance. While every site is unique, there are common issues that may be faced by most contractors.

PRINCIPLES OF EARTH RETAINING & STABILISING STRUCTURE FOR DEEP EXCAVATION

Temporary works for deep excavation rely on moderately conservative ground parameters and robust design solutions to limit movements of both the temporary works system and surrounding ground or structures within acceptable limits.

This is particularly true when working in the urban environment. Once major excavation commences, effective construction control of the works is required to keep movements within their limits. Instrumentation plays a crucial role in the safe construction of temporary works. This presentation aims to give an overview on design, construction and effective instrumentation & monitoring of deep excavation projects in Singapore.

Date: 13 December 2021, Monday

Time: 10am to 1pm

CPD Program: STUs (Structural) / STUs (Safety) / PDUs for PEs and CEngs (All To Be Confirmed)

Fees: \$20 (IES Members) / \$40 (Non Members (Fees exclude 7% GST)

To Register, please <u>click</u> HERE or Scan the QR Code



ABOUT THE SPEAKERS

SAFETY REQUIREMENTS AND CHALLENGES ON IMPLEMENTATION OF SAFE MEASURES IN DEEP EXCAVATION PROJECTS

Mr. Sivakolunthu Venkatesan (Venka) obtained his Bachelor of Building in Construction Management from NUS, Singapore and has experience in Singapore construction industries about 20 years and depth knowledge in Deep excavation projects which includes various Tunnel projects such as MRT Circle line -Kent ridge Station- Woh Hup, MRT downtown line - Promenade Station, Thomas MRT Thomson line- such as Maxwell Station, Marina Bay sands development-YHL/ KTC JV, Infrastructure and high-rise buildings, etc.

Currently, Mr Venka is a Senior Safety officer in China Communications Construction Company (Singapore Branch) Limited and he is currently working on the Singapore Changi Airport's Terminal-5 Project. Prior joining China Communications Construction, he was a MOM approved Trainer, Assessor and Developer in Singapore.

He has introduced Behavioural Based Safety Management Systems among construction workforce during this tenure in various construction and infrastructure projects.

He always accord the highest priority towards safety in his projects and strongly emphasizes to project management leaders and stakeholders that Safety is the sum of contributions to Safety Management. Mr. Venkatesan always eager to learn and promotes the workforce to learn and get educated through the continual gathering of knowledge through Safety Programmes, Trainings and Promotional Activities.

DESIGN PRINCIPLES OF EARTH RETAINING & STABILISING STRUCTURE FOR DEEP EXCAVATION



Dr. Sun Jianping

Dr. Sun Jianping is currently the technical cum design manager in China Communications Construction Company (Singapore branch) and part time lecturer in Nanyang Technological University. He is a Professional Engineer (Civil), Deputy Chairman of Civil & Structural Engineering Technical Committee, Geotechnical Division of Institution of Engineers Singapore and committee member of Society for Rock Mechanics & Engineering Geology (Singapore).

He has over 13 years of experience in rock engineering, project management and deep excavation ERSS design for Jurong Rock Cavern Project, Thomson East Coast Line and Changi Airport Project, etc.

Dr Sun obtained Bachelor degree in civil engineering from Tongji University in 2003, PhD degree from Chinese Academy of Sciences in 2009 and MSC in Civil Engineering with specialisation in geotechnical engineering from the Nanyang Technological University of Singapore in 2019. He has published more than 30 technical papers in the field of geotechnical engineering and is the editor of SCI Journal Advances in Civil Engineering and reviewer for some geotechnical research journals. He has received the Best Presentation Award 2018 (first runner-up) from Society for Rock Mechanics & Engineering Geology (Singapore).

Organised by Civil & Structural Engineering Technical Committee, Geotechnical Division



Mr. Sivakolunthu Venkatesan