

WEBINAR TALK ON “RECENT ADVANCEMENT OF SHIELD TUNNELLING TECHNOLOGY IN TAIWAN”

13th June 2023 (Tuesday)

4.00 P.M. – 6.00 P.M.

With its outstanding efficiency and reliability, shield tunneling has been one of the top methods adopted especially for soft ground condition and congested areas. Over the past decades, this method has been widely applied principally for MRT and utility projects in Taiwan where the associated technologies were introduced or developed to overcome space and time constraints.

This webinar shares the recent shield tunneling advancements in Taiwan through two MRT and one underground cable projects. In the MRT projects, these technologies included ductile segments employed for twin tunnels spaced smaller than 3 m apart, removal of underground obstruction (e.g., deep foundations), countermeasures for gravel and mixed ground conditions, and connection to operating stations.

In the underground cable project, they included TBMs docked in the ground using the modified DKT (Direct Docking Tunnel) method, fast boring that enabled excavation and segment erection operated at the same time, fast joints using straight and wedge connectors, TBM and segment design for sharp curves (with radius of curvature of alignment as small as 30 m), and recycling system for excavated mixture. These technologies led to such accomplishments as a tunnel being completed for as long as 5 km without shafts in-between and each ring of the segments being built within an hour.

The analyses and design for each technology are illustrated followed by the construction procedure and monitoring feedbacks. The overall assessment is provided at the end.

ABOUT THE SPEAKER



Dr. Jung-Feng Chang earned his B.S. and M.S. degrees from Civil Engineering Department at National Cheng Kung University, Taiwan. He obtained his Ph.D. degree from the School of Civil and Environmental Engineering at Cornell University, USA with specialty in geotechnical engineering. He then worked in the Geotechnical Engineering Department of Moh and Associates, Inc. as an engineer. For the past 17 more years, he has been involved in infrastructure (e.g., MRT, rails, roadway, airports, harbors, facilities, and etc.), building, and land development projects in Taiwan, China, Macau, and Southeast Asia with major works in geotechnical engineering investigation/design, review, consultancy, and project management. He is now a senior engineer and project manager at Moh and Associates, Inc.

Registration Fees

IEM Members : RM 15.00 | IEM Non Members : RM 70.00

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