

# Report on CIE-HKIE-IEM Tripartite Seminar on The Management and Case Study on Adjacent Underground Construction



by Ir. Liew Shaw Shong

GEOTECHNICAL ENGINEERING TECHNICAL DIVISION

**TRIPARTITE** Seminar originated as a bilateral institutional collaboration between The Institution of Engineers, Malaysia (IEM) and Chinese Taipei APEC Engineer Monitoring Committee in Chinese Institute of Engineer (CIE). In 2009, The Hong Kong Institution of Engineers (HKIE) and the Hong Kong Geotechnical Society (HKGES) had sent a delegation to attend the CIE-IEM Joint Seminar in Yilan, Taiwan.

The first CIE-IEM-HKIE Tripartite Seminar cum APEC Seminar was held in May, 2011 in Hong Kong and the second Seminar was hosted by IEM GETD on 23 October, 2012, in Kuala Lumpur. Last year, the Tripartite Seminar (Photos 1 to 6) was hosted by CIE in Taipei at Howard Civil Service International House on 15 November, 2013, followed by a technical visit (Photos 7 to 18) to "The Suhua Highway Mountain Section Improvement Project" on 16 November 2013.

Ten members from HKIE and 7 members from IEM attended the seminar. A total of 10 papers (three from IEM, three from HKIE and four from CIE) were presented. A copy of the proceedings has been placed in the IEM library for members' reference.

The aforementioned project for the technical visit consisted of 8 tunnels totalling 2.34km, bridges of 8.5km (balanced cantilever segmented bridges and cable-stayed bridges) and cut-and-fill road works of 6.5km with a total project budget of NT\$49.2 billion (RM5.4 billion). Due to increasing pressure from environmental conservationists and growing concern over environmental impact during construction, the project was being executed with a high level of environmental requirements (Photos 14 and 15), construction carbon footprint management, heritage preservation and safety requirements (Photos 16 to 18).

To achieve transparency as promised, the project team engaged with a real time monitoring system and full details of every aspect of the project with immediate updates were made accessible to the general public via its website ([www.suhua.gov.tw](http://www.suhua.gov.tw)). This benchmark project will serve as a good reference for Malaysian engineers, project clients and contractors for construction in sensitive areas.

CIE extended its hospitality to the delegates by hosting them to two dinners (Photos 19 to 23) and a seafood lunch (Photo 24) during the site visit. Special thanks to Ms. Chuo of the seminar secretariat for arranging the accommodation and transportation for IEM delegates and keeping the entire seminar running smoothly.

The next Tripartite Seminar will be held in Hong Kong next year. Announcements on the details of the seminar will be made progressively after the organising committee from HKIE is formed. ■

Ir. Liew Shaw Shong is currently the Chairman of IEM Geotechnical Engineering Technical Division (GETD). He is the Senior Director of G&P Geotechnics Sdn Bhd.



**Photo 1:** Opening speech by Dr John Li Chien-Chung, Vice Chairman of Chinese Taipei APEC Engineer Monitoring Committee, CIE  
**Photo 2:** Ir. Liew Shaw Shong presenting a memento to Mr. Yu Ter-Chyuan, Executive Secretary of Chinese Taipei APEC Engineer Monitoring Committee, CIE  
**Photo 3:** Group photo of CIE, HKIE and IEM delegates

**Photo 4:** Site visit group photo at The Suhua Highway Mountain Section Improvement Project  
**Photo 5:** On-site briefing at Tunnel portal  
**Photo 6:** Briefing inside the tunnel  
**Photo 7:** Mobile steel frame formworks for tunnel lining construction  
**Photo 8:** Reinforcements and water proofing membrane for concrete lining construction