Ir. Yee Yew Weng Organizing Chairman, Professor Chin Fung Kee Memorial Lecture c/o Ms. Janet Lim The Institution of Engineers, Malaysia Lots 60 & 62, Jalan 52/4, P.O. Box 223 (Jalan Sultan), 46720 Petaling Jaya, Selangor Tel. no. 03-79684001/4002 Fax no. 03-79577678 Email: sec@iem.org.my Website: www.myiem.org.my

### 26<sup>th</sup> ANNUAL PROFESSOR CHIN FUNG KEE MEMORIAL LECTURE

Integrated Infrastructure Systems for Future-Ready Cities 3<sup>rd</sup> September 2016

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# 26<sup>TH</sup> ANNUAL PROFESSOR CHIN FUNG KEE MEMORIAL LECTURE

To be delivered by

### Professor Er. Yong Kwet Yew

BBM, PPA, PhD, BEng (Hons), FIES, PEng, Accr.Adjudicator Professor of Civil Engineering and Vice-President National University of Singapore

on the subject of

## Integrated Infrastructure Systems for Future-Ready Cities

Saturday, 3<sup>rd</sup> September 2016 at 10.00 a.m.

Professor Chin Fung Kee Auditorium, 3<sup>rd</sup> Floor, Wisma IEM No. 21, Jalan Selangor, 46200 Petaling Jaya, Selangor Darul Ehsan

(Refreshments will be served from 9.00 a.m.)

Ir. Yee Yew Weng Organizing Chairman

Jointly organized by:

The Institution of Engineers, Malaysia

and

The Engineering Alumni Association of the University of Malaya

BEM Approved CPD/PDP Hours: 2 Ref. No: IEM16/HQ/345/L

#### Synopsis of Lecture

Cities are complex large-scale systems of which water and transport systems are as critical as the fragility of the aging urban centres. A Future-ready city would require a total review of the integration of residential, commercial and transport systems and provide better access to health-care and transport for the elderly. The new norm which is already happening is to build new intelligent buildings, fully integrated with a seamless public transport system to meet commercial, residential and recreational needs. These combined structures should make optimal use of both underground and aerial space in compact cities.

Cities around the world are also exploiting innovations in information technologies and data sciences to create the Digital or Smart City of the future. E-commerce, tele-commuting, wireless communication and data-driven decision making are changing the way we work and our lifestyle. The infrastructure of the Future-ready city will need to adapt to these changes and be designed to maximize the productivity benefits of these technologies. At the same time these information technologies offer opportunity to improve the planning, design, management and operation of the city infrastructure in an integrated and efficient manner. An intelligent and integrated transportation infrastructure powered by an info-structure is becoming a reality.

Every Future-ready city must have a climate resilient action plan to address warmer weather, heavier rainfall, prolonged dry spell and rising sea-levels that can cause significant damage to home and businesses. Rebuilding and enhancing urban infrastructure faces problems beyond the search for engineering solutions. Spending on infrastructure projects has been grossly inadequate, and policies and political barriers must be addressed and overcome. A city that stops investing in its infrastructure takes the first step toward decline.

The lecture will share some experiences from Singapore and other major cities on how to plan for an integrated infrastructure systems for Future-ready Cities.

#### C.V. of the Speaker

**Professor Er. Yong Kwet Yew** is Professor of Civil Engineering and Vice President at the National University of Singapore. He oversees the planning and sustainable development of campus infrastructure including the \$1 billion development of University Town. A graduate of the University of Sheffield, England, under a Grouped Engineering Scholarship, he joined NUS in 1979. He has held senior positions including Head of Civil Engineering, Founding Director of Centre for Soft Ground Engineering and Chairman of NUS-MINDEF Centre for Protective Technology. He was elected Fellow of the Institution of Engineers, Singapore in 2001 and appointed Accredited Adjudicator, Singapore Mediation Centre in 2005.

Prof Yong's research is a microcosm of the infrastructure development in Singapore. In the early 1980s during the building boom, his research was on performance of pile foundation. Some of the findings were later incorporated into the Singapore Code for Pile Design. In the late 1980s, his research with several colleagues on land reclamation led to an award winning layered clay-sand scheme of reclamation using marine clay as an alternative to sand-only fill for reclamation. In the 1990s, several innovative methods of ground improvement were developed to control movements associated with deep excavations and flood alleviation projects in urbanized Singapore. In the 2000s, with the rapid development of underground transportation, his focus was in tunneling and underground construction. Going forward into 2010s, the optimal use of land

and underground space ranks high on the national agenda and he was appointed Ministry of National Development/National Research Foundation Scientific Lead and Co-Chair of the R&D Committee on Land & Liveability. He has published more than 200 technical publications and delivered over 30 keynote/guest lectures at international conferences.

Prof Yong is past Chairman of the Association of Geotechnical Societies in Southeast Asia and chairs/chaired several boards and national committees in land transport and construction including the International Board of Advisers to LTA, Advisory Committee on Occupational Safety & Health for the Construction Industry (MOM) and the Accredited Checkers Selection Panel (BCA), He is a member of a high-level Development Projects Advisory Panel that vets and review large and complex public projects for the Ministry of Finance. He also serves on the Board of Land Transport Authority and is non-Executive Chairman of 2 public listed engineering companies established by former students. He also chaired LTA's Independent Investigation Panel on Nicoll Highway Collapse in 2004 and was a member of the MEWR Expert Panel on Enhancing Flood Protection in Singapore in 2011/12. He has served as consultant to government agencies as well as local and international companies in over 100 major construction projects in Singapore, ASEAN and China.

He received the Faculty of Engineering Teaching Excellence Award (1993, 1994 & 1996) and the Faculty Hall of Fame for Teaching Excellence (1997). He received commendations from the Ministry of Manpower in 2000 and Ministry of Education in 2006, and 3 National Day Awards - Public Administration Medal (Silver) in 2000, Public Service Medal in 2004 and the Public Service Star in 2008 - for significant contributions to the university, construction safety and land transport.

#### **Registration Fee**

Members, IEM	-	RM 20.00
Members, Engineering Alumni, University of Malaya	-	RM 20.00
Non-members	-	RM 30.00

All cheques/bank drafts must be crossed and made payable to "PROF CHIN FUNG KEE LECTURE FUND".

<u>IMPORTANT:</u> All registration fees must be FULLY paid before commencement of the Lecture.

#### Programme

Date	:	Saturday, 3 <sup>rd</sup> September 2016
Time	:	9.00 a.m – 10.00 a.m Registration & Light Refreshments 10.00 a.m – 11.30 a.m - Lecture 11.30 a.m – 12.00 p.m - Q&A Session
Venue	:	Professor Chin Fung Kee Auditorium 3 <sup>rd</sup> floor, Wisma IEM 21, Jalan Selangor, 46200 Petaling Jaya Selangor Darul Ehsan