

## Half-Day Talk on “Development of Human Gait Monitoring and Assessment System”

**Date** : Saturday, 8<sup>th</sup> September 2018  
**Venue** : IEM (Southern Branch) Training Centre, 24B, Jalan Abiad, Taman Tebrau Jaya, 80400 Johor Bahru.  
**Speaker** : Ir. Dr. Tee Kian Sek, Universiti Tun Hussein Onn Malaysia (UTHM)

### Synopsis

Human walking or gait is a continuous process of controlled supports and fallings of the body via the synchronous movement of the legs. The capability of walking promotes the dynamic of a human in everyday activities. From the view of human health, good quality of gait reduces the musculoskeletal injuries due to uncontrolled impact and collision. Human gait or walking styles could be monitored and assessed as a corrective measure. The applications includes: gait quality after putting on a new pair of shoes; gait quality after trauma or rehabilitation procedure; gait quality upon prescription or alignment of a prosthetic leg etc. Kinematic data of the walking steps could be collected instrumentally. The data are post-processed and statistically analysed. The data are normalized and projected into orthogonal basic vectors called Principle Component. Hence independent of the measure units of the sensors. Eventually, a visual guide assessment methodology is designed and developed enabling the comparison amongst human with respect to the ‘normal’ statistically. The farther to the centroid of the ‘normal’ indicates poor gait quality, and vice versa.

Time	Programme Tentative
8.30 a.m. - 9.00 a.m.	- Registration
9.00 a.m. – 9.10 a.m.	- Welcome Speech By IEM (SB) Organising Committee
9.10 a.m. – 10.15 a.m.	- Development of Human Gait Monitoring and Assessment System (Session 1)
10.15 a.m.- 10.30 a.m.	- Coffee Break
10.30 a.m.- 12.00 p.m	- Development of Human Gait Monitoring and Assessment System (Session 2)
12.00 p.m.- 12.30 p.m.	- Discussion - Questions & Answers Session
12.30 p.m.	End

### Speaker Biodata

Ir. Dr. Tee Kian Sek graduated with the honour degree in Mechatronic Engineering from Universiti Teknologi Malaysia in year 1997. He started his career as a PLC programmer with a local company dealing with material handling automation for nearly 4 years and later a bakery machinery company for nearly 2 years. Later he joined in Universiti Tun Hussein Onn Malaysia as an academician. He further his study in Mechatronic Engineering and eventually completed his PhD from the University of Leeds, UK, in year 2012. Since then, he is actively involved in lecturing and supervision, research and industrial collaboration. He sees that mechatronic engineering as a compound field that is applicable in many applications in industrial automations, rehabilitation, supportive and nursing devices, medical instruments and devices etc.

### Participant Fees:

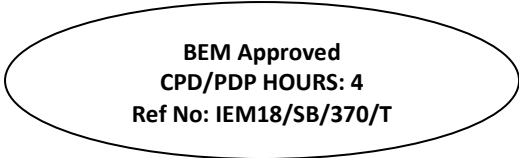
Grade	Online	Normal
IEM Corporate Member & Graduate Members (30 years and above)	RM70	RM90
IEM Graduate Members (Below 30 years)	RM60	RM80
IEM Senior Engineers (60 years and above)	RM60	RM80
IEM Student Members	RM50	RM60
Non-Member	RM120	RM150

**Closing Date: 3<sup>rd</sup> September 2018**

For **ONLINE REGISTRATION**, payment **MUST BE MADE VIA ONLINE PAYMENT** (bank-in the participant fees into the Institution’s Maybank Current Account (No. 5-013920-15708) before the **closing date**.

Registration will be on a first-come-first-serve basis. Kindly return the Reply Slip to the IEM (SB) office before **3<sup>rd</sup> September 2018** together with a non-refundable cheque for the participant fees made payable to **The Institution of Engineers, Malaysia (Southern Branch)**. Alternatively, you could bank-in the participant fees into the Institution’s Maybank Current Account (No. 5-013920-15708), and to facsimile both the Bank-in and Reply Slips to the Institution. The Institution requests all members cooperation in ensuring fees are paid in advance to the seminar. Please also be reminded that fees will not be refunded to absent participants who have paid, and to also note that all reservations must be paid despite participant cancellations. Thank you for your continuous support of the Institution.

**Chairman, Sub-Committee on Seminar and Technical Talk, IEM (SB)**



To: Hon. Secretary, The Institution Of Engineers, Malaysia (Southern Branch) **FAX: 07 - 331 9710**

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Saturday, 8<sup>th</sup> September 2018, 9.00 a.m. – 12.30 p.m. at the IEM (Southern Branch) Training Centre, Johor Bahru

I wish to attend the above talk. I enclosed herewith a cheque No. .... for the amount of RM.....as payment for the seminar fee.

Name of Member: ..... Membership No:.....

I/C No: .....

Address: ..... Tel (O): ..... Fax :.....

..... Tel (H/P):.....

..... E-mail:.....

Company's Name: .....

Signature: ..... Date: .....

**Note:** For IEM members, membership cards should be presented for identification purpose. Failure to present the card, one will be declared as a non-IEM member and he/she will be required to pay the non-IEM member fee.

**PERSONAL DATA PROTECTION ACT**

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