

TALK ON “STRUCTURAL HEALTH MONITORING (SHM) SYSTEM; A STATISTICAL PATTERN RECOGNITION APPROACH ON STRUCTURES ANOMALIES TO MICRO ENERGY HARVESTING”

Organise by the Engineering Education Technical Division (E2TD) & IEM
in Collaboration with University Putra Malaysia (UPM),
Institution of Mechanical Engineers Malaysia Branch (IMEchE) and Engineers Australia Malaysia Chapter (EAMC)
BEM Approved CPD/PDP: 2 hours **Ref: IEM17/HQ/076/T**

Date : **01 April 2017 (Saturday)**
Time : **09.00 a.m. – 11.00 p.m.**
Venue : **Auditorium Tan Sri Prof. Chin Fung Kee, 3rd Floor, Wisma IEM, P.Jaya, Selangor**
Speaker : **Assoc. Prof. Ir. Dr. Faizal Mustapha**

SYNOPSIS

The talk will define the aspects of Structural Health Monitoring (SHM) system, SHM is the process of implementing a damage detection strategy for aerospace, civil and mechanical engineering infrastructure. SHM allows the operators to make informed decision and definitely can contribute to economic and life safety advantages. The Statistical Pattern Recognition (SPR) is the core architecture of SHM to be highlighted in this talk follows by few case studies in comprehending the disruptive technologies of SHM from detecting structure anomalies and towards the possibility of incorporating micro energy harvesting system in line with SHM technologies.

SPEAKER BIODATA



Ir. Dr. Faizal Mustapha is currently an Associate Professor in the Department of Aerospace Engineering at the Universiti Putra Malaysia. He has been in UPM since 1999 and was before at SIRIM Berhad from 1996 as Researcher. His area of research is Structural Health Monitoring (SHM) and Smart Structures with an emphasis on smart sensor, advanced material, composite, hybrid composite and bio-composite, and also adopting and developing few of diagnosis algorithms extracted from the multi-variate analysis and signal processing techniques as applied to SHM.

He is also enhancing the renewable energy research via Smart Vertical Wind Turbine (sVAWT) and venturing into newly refined coating material from bio waste for fire retardant material, Solar PV and other related technologies. He is also being appointed and recognised as an Associate Fellow in Academy Science of Malaysia and had the experienced in administrative posts such as Deputy Dean and a Head of Department at the Faculty of Engineering. He'd authored and co-authored of one book, four book chapters and nearly 100 journal papers and conference proceedings. His current Scopus H-Index is 14 with more than 600 citations. He is also an expert panel reviewer under Science and Technology cluster for the Ministry of Science Technology and Innovation Malaysia (MOSTI), Ministry of Education (MOE), and also for Universiti Putra Malaysia. Peer review college member and editorial board member for *Journal of Surface Engineering and ASEAN Engineering Journal*. In the past he had secured more than (MYR) 1 Million or (USD 400K) under various research grants nationally and internationally, and actively involved in research that relates to SHM and new bio and eco materials. He had successfully filing 4 Patents and securing 2 Industrial design protection. He had graduated 7 PhD students and 11 Master by Research students. He is currently supervising 8 PhD and 1 Master Student under the various research topics. He had taught several courses in Undergraduate (UG) and Post Graduate (PG) courses and successfully introduced new subject in UG and PG levels as well. He had also co-initiated the International Conference of Composite Technology (ICCST) series of conferences and various local conferences as well. He is actively participated in few international conferences as invited and keynote speakers, presenters, technical committees and chairperson. He was awarded *Visiting Scholar and Visiting Research Scholar at University of Sheffield, UK and University of San Diego California, USA respectively and received few international awards and recognition of the Year 2007 and 2008* by the International British Society for Strain Measurement (BSSM). He is a member of the Institute of Physics, Professional Engineering with Practising Certificate under Board of Engineers Malaysia, Corporate Member of Institute of Engineers Malaysia, Accreditation Panel under the Malaysia Quality Assurance (MQA) Agency in ensuring the good quality of Malaysia engineering programs in various Private and Public universities and Colleges, and He is also the President of Malaysian Society of Structural Health Monitoring of Malaysia.

Ir. Assoc. Prof. Dr. Mandeep Singh
Chairman , Engineering Education Technical Division
Session 2016 / 2017

ANNOUNCEMENT TO NOTE

- **Non-members may also attend the talk but will need to pay a registration fee of RM50 and an administrative fee of RM15. GST is inclusive.**
- **Limited seats are available on a "first come first served" basis (maximum 100 participants). To secure your seat, kindly register online at www.myiem.org.my.**

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