INTRODUCTION

The area of vibration and system dynamics including the machine and structural health monitoring is now undergoing a major technological revamp in term of its approaches to handle the data obtained from the measurement devices. With the advent of the distributed sensors (or Internet of Things, IoT) and the availability of processing power and software to manage huge data (Big Data Analytics), the chances of finding a better solution to asset management is getting better. Companies with data based prognostics can predict machine downtime or structural life with higher accuracy, thus reducing the unplanned downtime and increasing yield. The application of the big data analytics is an important area and TheVibrationLab Universiti Sains Malaysia has taken the initiative to conduct a workshop on the Big Data Analytics in Condition Monitoring in order to better disseminate the idea to the industry and also to form special interest group so that the technology can be further develop within the local industry scenario.

OBJECTIVES

- To provide essential knowledge on big data analytics in condition monitoring

- To introduce techniques and system used for big data analytics in condition monitoring

CONTACT PERSON

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CLOSING DATE/PAYMENT ACCEPTED BEFORE :
20 NOVEMBER 2019
Organizer reserved the right to cancel the workshop if the number of participants are less then 10

SPEAKER BACKGROUND

MOHD SHAZLAN MOHD ANWAR

Mohd Shazlan Mohd Anwar is a Managing Director of Virtual Instruments & System Innovation (VISI) Sdn Bhd since 2011. He is a certified LabVIEW Developer (CLD) and Professional Instructor (CPI) and actively conducts a training for data acquisition and signal conditioning using LabVIEW. Up to the present, he has involved in several projects for system developments including High speed image acquisition, Weapon Separation Test Rig (WSTR) ground control system, T56 Rolls Royce engine test cell re-development, Rocket thrust measurement system and Automated optical inspection (AOI) system for hard drive industry. Mohd Shazlan also worked on various portable data acquisition systems and monitoring consultation for utilities, automotive, marine, and research purpose using National Instruments hardware and software tools. His previous experience as a Flight Test Engineer at Applied Engineering and Research Center, Daytona Beach Florida allows him to develop and maintaining data-acquisition system for aircrafts and rotary engine, data recording and troubleshooting using LabVIEW program.

VINAY MARJE

Vinay Marje has an experience of 22 years which covers Industry, Software and Business Development. In the current role at MSC Software as Senior, Vinay is helping customers from manufacturing industry across Indo-Pacific region in adopting a radical new approach to accelerate digital transformation using various operational technologies. Vinay has a Degree in Mechanical Engineering and Post-Graduate Diploma in Advanced Computing.

FAISAL NAZAMUDDIN

Mr. Faisal is a founder and managing director of Invicom Test & Measurement Sdn. Bhd. since 2010. The company is a regional player in the field of measurements and instrumentation with customers in Malaysia, Thailand, Singapore and Indonesia. Mr. Faisal has been personally involved in various instrumentation projects for clients such as Petronas, KLIA, KL Monorail, and Westport among others. His experience includes wide ranging areas such as structural dynamics for offshore platforms, remote monitoring for dehumidification systems, piezoelectric sensor integration, model system simulation and others. His previous experience as technical manager allows him to give technical support and training of modal testing and vibration testing instrumentation.

Tentative

Time	Session
8:00 – 8:30 a.m.	**Registration & Coffee**
8:30 – 8:45 a.m.	**Opening/ Welcoming speech/Safety briefing**
8:45 – 9:25 a.m. **Prof Zaidi Mohd Ripin** Director TheVibrationLab School of Mechanical Eng,USM	**Introduction to Big Data Analytics: Concepts, Technologies and Applications** What is Big Data, Big Data Sources, Big Data Analytics, Types Of Analytics, Examples of Big Data Analytics , Benefits of Big Data Analytics, Requirements for Successful with Big Data Analytics – Fact based decision making culture, Strong Data Infrastructure, Analytical tools, People skilled in analytics, Privacy,
9:25 – 10:20 a.m. **Dr Chan Ping Yi** USM	**Statistical Review : Assessment Technique for Classification** The collection of data, classification of data, false positive, true negatives, specificity and sensitivity, confidence intervals, estimation of errors in sensitivity and specificity
10:20 – 10:40 a.m.	**Coffee Break**
10:40 a.m. – 12:30 p.m. **Mohd Shazlan Mohd Anwar** Virtual Instrument & System Innovation Sdn Bhd	**Data Collection for Machine Condition Monitoring** Sensor type, Networked Sensor, Data collection , Making sense from the data, Development of system for machine condition monitoring and the application of Big Data Analytics
12:30 – 2:00 p.m.	**Lunch break and Networking session with sponsors/lecturers**
2:00 – 3.40 p.m **Vinay Marje** MSC Software	**Machine Learning and Finite Element Method for Physical System Simulation** This session will cover the recent development in the finite element method and how the application of machine learning can improve the productivity of the modeling and analysis obtained from the FE simulation.
3:40 – 4:00 p.m	**Coffee Break**
4:00 – 5:30 p.m. **Faisal Nazamudddin** Invicom Test and Measurement	**Application of measurement and finite element software in prognosis of the life of offshore structure - A Case Study** The collection of actual data from the offshore structurecoupled together with the finite element model of the offshore structrue can be used to calculate the remaining useful life of the structure.
5:00 – 5:30 p.m.	**Question and Answer** **Closing ceremony**

REGISTRATION FORM

Big Data Analytics in Condition Monitoring

Send registration form to**: Dr. Nurul Farhana Binti Mohd Yusof |** mefarhana@usm.my

NO.	PARTICIPANT NAME	POSITION & EMAIL
1.		
2.		
3.		
4.		
5.		

Organisation	
Address:	
Company Registration No:	**Postcode:**
Contact Person:	**Tel:** **Fax:**
E-mail:	**Mobile:**

MODE OF PAYMENT			NUMBER	BANK	NO. OF PARTICIPANTS		RM
I enclosed		Cheque			Normal		
		Bank Draft			(		
		Money Order					
		LO / PO			**TOTAL**		
Cheque / Bank Draft / Money Order / LO / PO must be made payable to 'USAINS HOLDING SDN. BHD."							

1. **Bank Transfer [P***lease fax your Bank-in Slip (Print your name & details on the slip)***].**
    Payee Name   : Usains Holding Sdn. Bhd.
    Details   : **Workshop on Big Data Analytics in Condition Monitoring** .
    Name of Bank : AmBank (M) Berhad, Level 21, Menara Dion, Jalan Sultan Ismail, 50250 Kuala Lumpur.
    Account Number : 888 – 100 – 985 – 0380
    Swift Code   : ARBKMYKL

2. **A Local Order (LO) or Purchase Order (PO) must be presented before the event.**
    The Organizer reserves the right to refrain a registered participant from taking part in the event if no proof of payment can be presented. This only applies to registered participants who have **NOT** paid the registration fee PRIOR to the event date.

3. **Cancellation / Substitution**
    A full refund **less administration cost of 20% from paid fee** will be given for cancellation received not later than **10 working days** before the event. No refund will be made after this period. However, substitute participants are welcomed at no extra charge provided written notice of at least **5 working days** before the event is given to the Organizer.