

THE INSTITUTION OF ENGINEERS, MALAYSIA

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Talk on "Time-Synchronized wireless sensor Networks for Structural Health Monitoring"

Organised by Information and Communications Technology Special Interest Group, IEM BEM Approved CPD/PDP Hours: 2 Ref No: IEM16/HQ/438/T

Day/Date: 26 October 2016, Wednesday

Time: 5.30 pm – 7.30 pm (Refreshments will be served at 5.00 pm)

Venue: Auditorium Tan Sri Prof. Chin Fung Kee, Third Floor, Wisma IEM, Petaling Jaya

Speaker: Mr. Damon Parsy

SYNOPSIS

Recent developments in sensor technology, especially when wireless technology is considered, have opened up new gates in terms of health monitoring and preemptive fault detection.

To meet these new challenges, BeanAir, a leading German company in sensing technology, designs and manufactures smart, rugged and time-synchronized wireless sensor networks.

On 2015, Beanair released a cutting edge WSN (Wireless Sensor Networks) named "Space Wireless" for Structural Health Monitoring (SHM) and Condition Monitoring Systems (CMS) applications. Previously developed to monitor the next generation European space launch named "Ariane 6", Space Wireless is the world's first WSN coming with deterministic real-time communication and jamming awareness mechanism.

Spacewireless® technology comes with Ultra-Wide Band technology and provides a performant jamming awareness mechanism. It operates on the UWB frequency band (3.5GHz up to 6.5GHz), which is broader and much less crowded than 2.4GHz and 868/915 MHz frequency bands. Wireless network reliability is improved by the availability of lossless data transmission algorithms and a deterministic propagation delay. Thanks to UWB Radio Technology and Time-of-Flight algorithms developed by Beanair, Spacewireless® can reach a time-synchronization less than 10 µs over the WSN.

BIODATA OF SPEAKER



Mr. Damon Parsy, graduated in Master's Degree in Embedded System from Ecole Centrale Marseille (France) in 2004, Mr. Damon worked for Valeo Group as a project leader. In 2008, Mr. Damon co-founded Beanair SAS in Paris-Region after achieving a market survey on civil engineering market. After several years of rapid growth, Mr. Damon decided to settle Beanair headquarter in Berlin-Germany. This decision allowed Beanair to reach a higher production capacity and

better quality.

Mr. Damon would like to share the latest solution in this field. He has conducted seminars in Australia and India. For this trip in October, he would like to include Malaysia as part of his Korea, China and Singapore events.

NOTE:

The targeted audience to join this event will be engineers in:

- Civil and Structural Engineering
- Geo Technical Engineering
- Tunneling and Underground Space Engineering
- Oil and Gas Engineering
- Engineers from others field are most welcome to join us!

Ir. Chai Chen Sing

Chairman,

Information and Communications Technology Special Interest Group, IEM

ANNOUNCEMENTS TO NOTE:

- Preferential admission to talk shall be accorded to IEM members (preregistration and online registration are NOT required). Telephone and/or fax reservation will NOT be entertained.
- 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.
- For members of affiliated organisations, there will be no registration fee payable. However, they are requested to produce their membership card as proof of membership. For the list of affiliated organisations, please refer to IEM website at www.myiem.org.my under International/MoU.
- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- IEM members are required to produce membership cards for confirmation of attendance (CPD purpose).
- Latecomers will not be allowed to enter if the lecture hall is full nor be entitled to CPD.
- IEM members who fail to produce their membership cards will be charged a fee of <u>RM25.00</u>. GST is inclusive.

ADMINISTRATIVE FEE

- Kindly be informed that an administrative fee of <u>RM15</u> is payable for talks organized by IEM. GST is inclusive.
- The fee would be used to cover overhead costs, building maintenance expenses as well as contribute to Wisma IEM Building Fund.
- All contributions will be deeply appreciated by IEM.
- Student Members are however exempted.

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