



# The Institution of Engineers, Malaysia

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## Talk On “ENHANCING THE VALUE OF MODERATE AND COARSE SPATIAL RESOLUTION OF REMOTE SENSING IMAGERY”

Organized by Engineering Education Technical Division, IEM

BEM Approved CPD/PDP Hours: 2 Ref No: IEM16/HQ/252/T

Date : 10<sup>th</sup> August 2016 (Wednesday)  
Time : 5.30 pm – 7.30 pm (*Refreshments will be served at 5.00 pm*)  
Venue : Auditorium CFK, 3<sup>rd</sup> Floor, Wisma IEM.  
Speaker: Dr Anuar Mikdad Muad

### SYNOPSIS

Fine spatial resolution sensor of optical remote sensing provides detailed information of the Earth’s surface. There are ~40 satellite systems with a spatial resolution < 3 m, such as IKONOS, QuickBird, WorldView, etc. For example, QuickBird can offer spatial resolution of 0.6 m in its panchromatic band. The main drawback of the fine system is the cost of the imagery. The basic image product, without pre-processing, will cost ~US\$20/km<sup>2</sup>. Processed imagery may increase the cost several times. On the other hand, moderate and coarse resolution sensors provide inexpensive solution for this issue. For example, Système Probatoire d’Observation de la Terre (SPOT) with a spatial resolution of 4-10 m, costs only ~US\$5/km<sup>2</sup>. However, the moderate and coarse systems provide less detailed information about the land cover on the Earth’s surface. Several attempts were made to increase the spatial resolution of the remote sensing imagery and provide land cover classification at a subpixel scale using a variety of super-resolution mapping (SRM) algorithms. This talk presents state-of-the-art SRM algorithms and highlight key challenges for the future research in this field.

### BIODATA OF SPEAKER



Anuar Mikdad Muad received a Bachelor and Master Degrees in Electrical, Electronic and Systems Engineering from Universiti Kebangsaan Malaysia in 1999 and 2005, respectively. He received a PhD. degree in Remote Sensing from the University of Nottingham, United Kingdom in 2011. He has two years working experience in developing digital image radiography system that is used in non-destructive testing (NDT) industries while working for Malaysia Nuclear Agency from 1999 to 2001. He is currently a senior lecturer in the Department of Electrical, Electronic and Systems Engineering at Universiti Kebangsaan Malaysia. His main research interest are signal and image processing, and machine learning especially for remote sensing applications. He serves as a regular reviewer for articles in IEEE Transactions on Geoscience and Remote Sensing, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, IEEE Geoscience and Remote Sensing Letters, and International Journal of Remote Sensing.

**Ir. Prof Dr Vinesh Thiruchelvam**  
**Chairman**  
**Engineering Education Technical Division, IEM**

### **ANNOUNCEMENTS TO NOTE:**

- Preferential admission to talk shall be accorded to IEM members (pre-registration and online registration are NOT required).
- Nonmembers may also attend the talk but will need to pay a registration fee of RM50 and an administrative fee of RM15. GST is inclusive.
- Members of affiliated organizations upon producing their membership cards will be exempted from paying registration fee. Administrative fee is nevertheless applicable.
- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- IEM members are reminded to produce membership cards for confirmation of attendance (CPD purpose) failing which a fee of RM25 will be imposed. GST inclusive.

#### **ADMINISTRATIVE FEE**

- Kindly be informed that an administrative fee of RM15 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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