



Enhancing the value of moderate and coarse spatial resolution of remote sensing imagery

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This talk was given by Dr Anuar Mikdad from Universiti Kebangsaan Malaysia on 10 August 2016. The talk looked into 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/km2. 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/km2. 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.

