

# **“Outline of Radar Integrated Nowcasting System (RaINS)”**

**Organised by Water Resources Technical Division, IEM**

BEM Approved CPD/PDP hours: 2

Ref No: IEM20/HQ/249/T(w)

**Friday | 30 October 2020 | 10:00AM – 12:00PM**

**Registration Fees: IEM Members: RM15.00**

**IEM Non Members: RM 70.00 |**

## **Synopsis:**

Nowcasting is the description of the current state of the weather in detail and the prediction of changes that can be expected on a timescale of a few hours. In the time range of 0 to 6 hours, it is possible to forecast small-scale features such as individual storm cells with reasonable accuracy. Utilizing real-time radar observation data at high spatial and temporal resolution allows forecasters to analyze small-scale features and issue accurate forecasts valid for the next few hours. The high resolution of radar that is less than 1 kilometer coupled with the frequent real-time scans every 10 minutes makes radar nowcasting a powerful tool in warning the public of hazardous, high-impact weather including squall-lines and thunderstorms which causes flash floods, lightning strikes and destructive winds. The mainstay of radar nowcasting is the extrapolation of intense radar echoes to pin-point the exact location of a high-risk storm in the next few hours. To further increase the effective forecast time, blending the short-term extrapolation of radar echoes with Numerical Weather Prediction (NWP) forecasts is performed. From adopting the SWIRLS (Short-range Warning of Intense Rainstorms in Localized Systems) developed by the Hong Kong Observatory, MET Malaysia has developed and operationalized the state-of-art Radar Integrated Nowcasting System (RaINS) since August 2017. RaINS has now become the main forecast tool for issuing thunderstorm warning by MET Malaysia.

## **YIP WENG SANG , the Speaker**

Meteorologist and Assistant Director of the Research and Technical Development Division, Malaysian Meteorological Department (MET Malaysia). He holds a Bachelor of Science (Physics) from the University of Malaya. He has over 10 years experience in Meteorological Research and Nowcasting (ultra short-range weather forecast up to 6 hours) for Malaysia. Additionally, he jointly developed the RaINS nowcasting system which was put into operation in August 2017. Now, he is actively involved in improving the RaINS nowcasting system through integration of satellite data and integration of radar rain gauge correction.



**Dato Ir. Hj. Mohd. Azmi bin Ismail - Chairman**

**Water Resources Technical Division, IEM**

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