



## IEEE Signal Processing WA Chapter

### Seminar Notice

**Title:** *Battery-less Smoothing of PV Generation using Sky-Camera*

**Presenter:** Mojtaba Saleh

**Time:** 4pm – 5pm

**Date:** Wed 25 July 2018

**Venue:** Meeting Room JO 23.351 (Building 23, Level 3)  
School of Engineering, Edith Cowan University, 270 Joondalup Drive,  
Joondalup WA 6027

**Cost:** Free to all IEEE members as well as non-members

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#### **Abstract:**

Due to the effect of rapidly passing clouds, the PV plants exhibit an intermittent export power which cannot be addressed by the conventional reserve capacity of the power network. Therefore, the grid operators have recently introduced strict ramp-rate requirements on the export power of the PV plants. The battery energy storage can effectively regulate the intense fluctuations termed as “PV generation smoothing”. Alternatively, the short-term cloud prediction using the Sky-Camera enables a more interactive smoothing approach which eliminates the need for the expensive battery storage. To mitigate the sudden variations in PV plant output, it slowly ramps down the plant export before the PV plant is shaded by the passing clouds and ramps up as soon as the clouds are cleared.

#### **About the Speaker:**

Mojtaba Saleh received the B.Sc. and M.Sc. degree in electrical engineering from the University of Isfahan and Iran University of Science and Technology (IUST), both in Iran, in 2008 and 2011, respectively. He completed his PhD in electrical and computer engineering at Curtin University, Perth, Australia, in 2017. From 2009 to 2011, he was a research student in Power Electronic and Electric, Magnetic Fields Research lab at IUST. He joined Magellan Powertronics, Perth, Australia as an R&D engineer in 2013. His main research interests include modelling, design and control of power electronic converters, renewable energy resources, and battery storage systems.