



















## **WORKSHOP**

Global Energy Internet, Modern Power Supply and Smart Grid Techniques

School of Electrical, Electronic and Computer Engineering

The University of Western Australia

**Billings Room (3rd Floor)** 

Thursday, 20 August 2015

#### INTRODUCTION

The theme of the 5th Smart Grid Workshop of UWA is *Global Energy Internet, Modern Power Supply and Smart Grid Techniques*. Many interesting topics such as the concept of global energy internet, low-carbon technology, energy storage, wide-area and control and advances in state estimation will be presented by international, national and local experts. Organised by the School of Electrical, Electronic and Computer Engineering, The University of Western Australia, the workshop will be held in Billings Room on Thursday, 20 August 2015. The aims of the workshop are to disseminate ideas and techniques for the development of modern electricity supply systems and to provide a forum for discussions and experience sharing with national and overseas experts. The previous workshops held in the last three years were well participated by participants from industry and academia.

This workshop is supported by UWA, Faculty of ECM and School of EECE, Western Power Corporation, Horizon Power, The University of Sydney, Curtin University, State Grid Energy Research Institute, Beijing, China, Tsinghua University, Beijing, China, Macau University of Science and Technology, IEEE Section WA, IEEE Power and Energy Engineering and Power Electronics Chapter WA, IEEE Systems, Man, and Cybernetics (SMC) Society Technical Committee on Intelligent Power and Energy Systems and IEEE SMC Chapter WA. Participation in the workshop is free. Interested engineers, academics, research students and IEEE members are welcome.

#### REGISTRATION

Registration: by Wednesday 13th August 2015 (first come, first serve until vacancy filled)

Email: admin-eece@uwa.edu.au

Enquiries: Administration Office, School of Electrical, Electronic and Computer Engineering

PH: 08 6488 3106 Email: admin-eece@uwa.edu.au

# **PROGRAMME** (subject to changes)

## Workshop Chairperson Professor Kit Po Wong

### **Morning Sessions**

9:30 am - 9:35 am: Welcome

Professor Farid Boussaid Head of School of Electrical, Electronic and Computer Engineering, UWA

9:35 am - 9:45 am: Open Speech

Professor Yinong Liu Deputy Dean, Faculty of Engineering, Mathematics and Computing, UWA

9:45 am - 10:30 am: Vision, Mission and Values of Global Energy Internet

Professor Loi Lei Lai Director of Energy Strategy, Planning, Policy Support, Research and Development Centre State Grid Energy Research Institute Beijing China

# 10:30 am - 11:15 am: Enhancing network supply availability for non-firm or radially connected customers

Peter Martino Principal Engineer Transmission - Network Operations Western Power Corporation Western Australia

11:15 am - 11:30 am: Networking Break

#### 11.30 am - 12:15 pm: From Smart Grid to Energy Internet

Professor Zhaoyang Dong Head, School of Electrical and Information Engineering, Director, Clean Intelligent Energy Networks Research Group The University of Sydney Australia

#### 12:15pm - 1:00 pm: Development of low-carbon technologies in power systems

Professor Chongqing Kang Professor and Vice Dean, Department of Electrical Engineering Director of Joint Research Centre for Low Carbon Electricity Technology Centre Tsinghua University Beijing China

### Afternoon Sessions

# 2:00 pm - 2:45 pm: Increasing Renewable Energy in Horizon Power Systems

David Stephens Manager Capacity Management Services Horizon Power Western Australia

# 2:45 pm - 3:30 pm: Community detection and determination in complex networks, with applications to power systems

Professor Ah Chung Tsoi Dean of Faculty of IT Macau University of Science and Technology Macau

3:30 pm - 3:45 pm: Networking Break

3:45 pm - 4:30 pm: Wide Area Transient Control

Professor Gerard Ledwich Electrical Engineering and Computer Science Queensland University of Technology Queensland, Australia

# 4:30 pm - 5:15 pm: Dispatch Planning for Large-scale Wind Power - Pumped Hydroelectric Energy Storage Scheme

Professor San Shing Choi Former Head of School of Electrical & Electronic Engineering Nanyang Technological University, Singapore Adjunct Professor, University of Western Australia Adjunct Professor, Curtin University Western Australia

## 5:15 pm - 6:00 pm: Advanced Techniques for Dynamic State Estimation

Professor Tyrone Fernando School of Electrical, Electronic and Computer Engineering University of Western Australia Western Australia

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