

Recent Trends in Power Grid Monitoring

April 12-13th 2010, at Imperial College London



This industry-academia event in Wide Area Monitoring Systems (WAMS) for power transmission grids will examine:

- the state of the art
- future industry directions
- recent research results

Speakers include industry experts, practicing engineers and university researchers.



New emerging measurement technologies using time-synchronised wide area measurements are essential to manage the operation of power transmission grids in a complex and rapidly changing environment. For instance, the UK grid must adapt by 2020 to bring power from many new wind generation sites to industry and population centres.

A workshop is planned at Imperial College London to discuss the state of the art and to disseminate recent research findings and industry practice in the area of Wide Area Monitoring Systems (WAMS). It brings researchers and practising engineers face to face with international experts in this field.

Speakers will cover the following topics:

- Long term industry needs
- Plans for future deployments of WAMS technology in the UK and Europe
- New algorithms for WAMS e.g. non-linear and non stationary data analysis tools
- Use of WAMS data:
 - to quantify participations of generators and network devices in the system dynamics
 - to identify root causes of system-wide oscillations.
 - to monitor and analyze the system dynamics and stability

The EPSRC has sponsored research at Imperial College London in WAMS with support from ABB and National Grid. Imperial, ABB and National Grid are joined by Aalto University School of Science and Technology and Fingrid in organizing the event.

Attendance is free of charge but it is necessary to register.

Please use the registration form at the link below.

<http://personal-pages.ps.ic.ac.uk/~nina/WAMSEvent/WAMSEventREGISTRATIONFORM.doc>

**Recent Trends in Power Grid Monitoring: 12 - 13th April, 2010,
Imperial College London
Department of Electrical and Electronic Engineering**

Monday, 12th April.2010

12:00 -14:00	Registration: Hallway to Gabor Seminar Room 611, 6th floor, Department of Electrical and Electronic Engineering, Imperial College London
12:30 -14:00	Lunch
14:00 -14:15	Welcome Address: Prof PYK Cheung , Head of Electrical and Electronic Engineering
14:15-15:00	National Grid Roadmap for PMU deployment: William Hung and Alex Carter , National Grid , UK:
15:00-15:45	Capturing long term trends using data-driven methods: Tuomas Rauhala , FINGRID , Finland
15:45-16:15	Tea
16:15-17:00	Why PMU in a small country? Prof Srdjan Skok , Technical University Rijeka, Croatia.
	End of Day 1

Tuesday 13th April 2010

9:30-10:00	Tea-coffee
10:00-10:45	PMU and WAMS Technology: Mats Larsson , ABB , Switzerland:
10:45-11:30	Wide Area approach to system operation: Prof Liisa Haarla , School of Science and Technology, Aalto University, Helsinki, Finland
11:30-11:35	Short break
11:35-12:20	Large-Scale WAMS. Bikash C. Pal , Imperial College London , UK; Kay Görner , Technische Universität Dortmund , Germany; Tadeja Babnik , ELPROS , Slovenia.
12:30-13:30	Lunch
13:30-14:45	Poster forum: There will be five 15 minute long presentations by young researchers including: <ul style="list-style-type: none"> - Jukka Turunen, Aalto Univeristy: Wavelets applications to analyse PMU signals. - Jerry Thambirajah, Imperial College London. Detecting oscillation from ambient driven inputs. - Michael Weixelbraun, University of Technology, Graz, Austria: Analyzing power oscillations in an 110kV network. - Linash PK and Pawel Regulski, Imperial College London and University of Manchester: Connecting Manchester, Imperial and Strathclyde power system laboratories through PMUs. - PJ McNabb, University of Edinburgh:
14:45-15:25	Poster display and coffee
15:25-15:55	Panel Discussion: Chair: Prof Nina Thornhill , Imperial College London
15:55-16:00	Vote of thanks and closure: Bikash C Pal , Imperial College London