Please send completed form before **May 20th** to:

Ms. Melinda Curtis
E&EE, B5 Ferranti Bldg,
The University of Manchester,
PO Box 88, Manchester M60 1QD

Phone: +44 (0)161 306 4705
Fax: +44 (0)161 306 4820

Email: melinda.curtis@manchester.ac.uk

Registration Form

Name: _____

Company: _____

Position: _____

Address: _____

Phone: _____ Fax: _____

E-mail: _____

Company main activity: _____

EES-UETP Membership No: _____

COURSE FEES

Lectures, Course CD, Course notes, tea/coffee breaks and lunches are included in the course fee.

Members of the EES-UETP:	**£ 360**
University non members of the EES-UETP:	**£ 620**
Industry non members of the EES-UETP:	**£ 1020**

The Course Secretariat will send an invoice to each registered participant, after the reception of the filled Registration Form.

ACCOMMODATION

Special Prices have been arranged at £65 bed/breakfast for single occupancy. Please book rooms directly with the **Britannia Hotel** as soon as possible to guarantee a room.

Address: Portland St, Manchester M1 3LA
Phone : +44(0)8458381020
Fax : +44(0)161 236 9154
email: centralgroups@britanniahotels.com

http://www.venues.uk.com/conference/contacts.asp?hotel=704

Room reservations must be made by **May 20th**. Please quote "**EEMA-1106**". Reservation requests after that date will be based on space and rate of availability.

INFORMATION, REGISTRATION AND COURSE LOCATION

The University of Manchester
School of Electrical & Electronic Engineering
Ferranti Building B14, Sackville Street
PO Box 88, Manchester M60 1QD, UK

Secretariat: **Ms. Melinda Curtis**
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Course Coordinator: **Prof Vladimir Terzija**
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Electric Energy Systems
University Enterprise Training Partnership
http://www.eesuetp.unibo.it/

2007 Course Program

Wide Area Monitoring, Protection & Control of Power Systems

June 12- 14, 2007

OBJECTIVES

Synchronized Measurement Technologies (SMT), such as Phasor Measurement Units (PMUs) have resulted in the design and application of various wide area monitoring, protection and control (WAMPAC) schemes. Most provide significant reliability and financial benefits in the planning, operation and maintenance of power networks at both the distribution and transmission level. This course is designed to ensure electrical and electronic engineers involved in the design, operation and maintenance of electrical power networks and the associated primary and secondary plant have the knowledge and skills necessary to deploy synchronized measurement technology in WAMPAC applications. The course is structured so that the first half focuses on technical and implementation issues, while the second half addresses applications and benefits. Special two Demo-Sessions are prepared to demonstrate WAMPAC features.

INTENDED AUDIENCE

This course is intended for professionals from transmission system operators, regulators, generation companies, customers (industrial facilities), consultants and post-graduate students.

COURSE DURATION

This is a three day course, lasting from Tuesday the 12th to Thursday the 14th of June, 2007.

MANCHESTER 1824

CONTENTS

- Introduction on power system needs for WAMPAC **(PA Crossley)**
- Fundamentals of synchronized measurement technology **(V Terzija)**
- Wide-Area Monitoring, Protection, Automation and Control (WAMPAC) **(V Terzija)**
- Communication networks protocols and related standards **(H Li)**
- Real time monitoring and control, system and market operation (congestion, market trading) and restoration applications **(D Novosel)**
- SMT off-line applications **(D Novosel)**
- SMT based real-time state estimation **(V Terzija)**
- Demo1 - This DEMO focuses on software products & applications developed in Europe **(D Karlsson and V Terzija)**
- SMT real-time protection and control applications (advanced protection, relaying settings, full real time control, close loop systems) **(D Karlsson)**
- System design of WAMPAC systems **(D Karlsson)**
- Implementing WAMPAC system, experience from tests and installations **(D Karlsson)**
- System reliability and financial benefits of SMT and WAMPAC) **(D Novosel)**
- Demo2 - This DEMO focuses on software products & applications developed in the US **(D Karlsson, V Terzija)**
- Case studies: applications around the world **(PA Crossley)**
- Panel discussion **(All)**

INSTRUCTORS

Prof Peter A Crossley
The University of Manchester, Manchester, UK

Dr Daniel Karlsson
Gotia Power, Sweden

Dr Haiyu Li
The University of Manchester, Manchester, UK

Dr Damir Novosel
President - InfraSource Technology, USA

Prof Vladimir Terzija
The University of Manchester, Manchester, UK

COURSE COORDINATOR

Professor Vladimir Terzija
EPSRC Chair Professor in Power System Eng

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LIMITED NUMBER OF SPACES, PLEASE BOOK NOW TO AVOID DISAPPOINTMENT!!