



1st SYSWIND Winter School on Signal Processing, Wireless Sensor Network and System Identification

Dublin

15-19 November 2010



www.syswind.eu/winterschool

*Organised by the scientific committee
of the SYSWIND project.*



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Introduction

The first SYSWIND Winter School lectures will focus on research informed training on topics such as signal processing, wireless sensor network and system identification for wind turbine applications. It will be relevant to industry practitioners and engineers as well as academic researchers and students working in the field of mechanical, civil, structural and electrical engineering, aerodynamics and computer science.



Topics

Various aspects of topical areas of signal processing, system identification and wireless sensor network in relation to wind turbine engineering will be covered. The attendees will be provided with an overview of the state-of-art knowledge and techniques in these areas. This field of research is becoming a key for reliable, safe and efficient operation of modern multimegawatt wind turbines.

Lecturers

The lectures in the winter school will be delivered by speakers/researchers of international reputation:

- Dr. T. Barszcz, Director, EC Systems & AGH University of Science and Technology, Poland
Wind Turbine & Monitoring Aspects, Wind Turbine Monitoring: Industrial Applications
- Prof. B. Basu, School of Engineering, Trinity College Dublin, Ireland
Online System Identification & Wireless Sensor Network (WSN)
- Prof. Q. Chen, Nanjing University of Aeronautics and Astronautics, China
Signal Processing
- Prof. S. Fassios, University of Patras, Greece
Statistical Time Series for System Identification
- Dr. D. Mandic, Imperial College London, UK
Signal Processing & Machine Learning
- Dr. C. McGoldrick, School of Computer Science, Trinity College Dublin, Ireland
Wireless Sensor Network, WSN Demo/Tutorial
- Dr. C. Meskell, School of Engineering, Trinity College Dublin, Ireland
System Identification for Aeroelastic Systems
- Prof. S. Nagarajaiah, Rice University, USA
Output only Modal Identification
- Prof. W.J. Staszewski, Sheffield University, UK
Fundamentals of Signal Processing
- Prof. K. Worden, Sheffield University, UK
Nonlinear System Identification



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Tentative Itinerary

Monday, 15 November 2010

9:00 - 9:30 Registration

9:30 - 9:40 Introduction by Coordinator

9:40 - 9:50 Welcome Address (TBC)

10:00 - 11:00 Keynote Address I (TBC)

11:00 - 11:30 *Coffee*

11:30 - 12:30 Keynote Address II (TBC)

12:30 - 14:00 *Lunch*

14:00 - 14:55 Wind Turbine & Monitoring Aspects

15:00 - 15:50 Wind Turbine Monitoring: Industrial Applications

15:50 - 16:10 *Coffee*

16:10 - 17:00 Fundamentals of Signal Processing

Tuesday, 16 November 2010

9:00 - 9:50 Signal Processing & Machine Learning I

10:00 - 10:50 Signal Processing & Machine Learning II

10:50 - 11:10 *Coffee*

11:10 - 12:00 Signal Processing & Machine Learning III

12:00 - 12:50 Induction hour (For SYSWIND ESRs)

13:00 - 14:00 *Lunch*

14:00 - 14:50 System Identification for Aeroelastic Systems I

15:00 - 15:50 System Identification for Aeroelastic Systems II

15:50 - 16:10 *Coffee*

16:10 - 17:00 System Identification for Aeroelastic Systems III



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Wednesday, 17 November 2010

- 9:00 - 9:50 Statistical Time Series for System Identification I
- 10:00 - 10:50 Statistical Time Series for System Identification II
- 10:50 - 11:10 *Coffee*
- 11:10 - 12:00 Statistical Time Series for System Identification III
- 12:00 - 12:50 Induction hour (For SYSWIND ESRs)
- 13:00 - 14:00 *Lunch*
- 14:00 - 14:50 Online System Identification & Wireless Sensor Network I
- 15:00 - 15:50 Online System Identification & Wireless Sensor Network II
- 15:50 - 16:10 *Coffee*
- 16:10 - 17:00 Online System Identification & Wireless Sensor Network III

Thursday, 18 November 2010

- 9:00 - 9:50 Wireless Sensor Network I
- 10:00 - 10:50 Wireless Sensor Network II
- 10:50 - 11:10 *Coffee*
- 11:10 - 12:00 Wireless Sensor Network III
- 12:00 - 12:50 Induction hour (For SYSWIND ESRs)
- 13:00 - 14:00 *Lunch*
- 14:00 - 14:50 Nonlinear System Identification I
- 15:00 - 15:50 Nonlinear System Identification II
- 15:50 - 16:10 *Coffee*
- 16:10 - 17:00 Nonlinear System Identification III

Friday, 19 November 2010

- 9:00 - 9:50 Output only Modal Identification I
- 10:00 - 10:50 Output only Modal Identification II
- 10:50 - 11:10 *Coffee*
- 11:10 - 12:00 Output only Modal Identification III
- 12:00 - 12:50 Induction hour (For SYSWIND ESRs)
- 13:00 - 14:00 *Lunch*
- 14:00 - 14:50 Wireless Sensor Network Demo/Tutorial I
- 15:00 - 15:50 Wireless Sensor Network Demo/Tutorial II
- 15:50 - 16:10 *Coffee*
- 16:10 - 17:00 Wireless Sensor Network Demo/Tutorial III



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Registration

The fee for participants is 150€. Please note that travel costs and accommodation are not included in this price.

The project is EU funded which allows us to give free accommodation for the first ten SYSWIND external participants registering for this winter school.

Please register on our website:

www.syswind.eu/winterschool/registration

Registration deadline: 15 October 2010

Location

The first SYSWIND Winter School will be held in the O'Callaghan Mont Clare Hotel in Dublin, Ireland.

Address:

O'Callaghan Mont Clare Hotel
At Merrion Square, Dublin 2, Ireland
T: +353 1 6073800
F: +353 1 6615663
E: info@ocallaghanhotels.com

www.ocallaghanhotels.com/dublinmain/montclare.aspx



The O'Callaghan Mont Clare Hotel is located across from the O'Callaghan Alexander and Davenport to Dublin City's Georgian Merrion Square within minutes walk of Grafton Street, Stephen's Green and Trinity College.

The Aircoach stops close to the hotel. There is a taxi rank in front of the hotel. The local DART Rapid Train Station that serves Dublin's coastal route is within minutes walk of the hotel.

Organisation

The first SYSWIND Winter School is organised by the scientific committee of the SYSWIND project.



„I am looking forward to welcoming you to the first SYSWIND Winter School.“

*Prof. Biswajit Basu,
Project Coordinator*

B. Basu