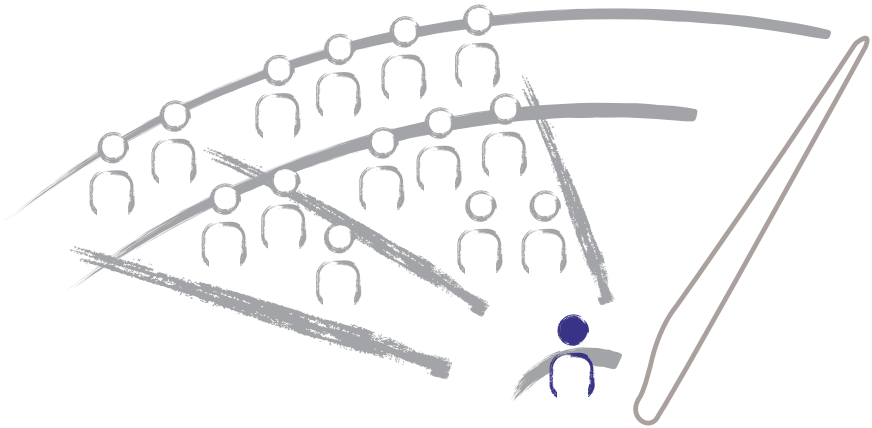

EAWE SUMMER SCHOOL 2010 PAMPLONA

EVENT GUIDE

European Academy of Wind Energy • Summer School

Pamplona, Spain, 17–21 May 2010

CENER

HOSTED BY

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centro nacional de energías renovables

Welcome to the Summer School of EAWE

We cordially invite you to participate at the EAWE Summer School from 17-19 May 2010 in Pamplona, Spain, hosted by CENER. The EAWE has organized this Summer School for all PhD researchers on wind energy related topics in their first years. Most PhD researchers specialize in a particular area, without having time and opportunity to take care of the interdisciplinary aspects of their topic. To facilitate this, the Summer School offers introductory courses on almost all aspects of wind energy, with the objective to provide the researchers a general background on wind energy. This Summer School is organized together with the Marie Curie ITN project Wind Resource Assessment Audit and Standardization (WAUDIT). The WAUDIT part of the school specializes on aspects of meteorology and wind resource assessment. The EAWE part is open for all PhD researchers, the WAUDIT part is for the PhD's in this project. If you are a PhD researcher on this topic but outside WAUDIT, and you are interested to attend this part too, you can contact the WAUDIT coordinator, Javier Sanz Rodrigo, jsrodrigo@cener.com.

This Summer School is the first of a series. The second School will be held February 2011 in Brussels at the von Kármàn Institute, and focuses on some applied topics like wind turbine and wind farm design, as well as scientific writing and presentation techniques. The third and final School is dedicated to economical and environmental aspects and to entrepreneurship and project development. This School will be held September 2011 at the Technical University Delft, together with the PhD seminar of the EAWE. Please check the website of the EAWE, www.eawe.eu, for the dates and info.

The Summer Schools are free of charge. If you like to attend, send a mail to eaweschool10@cener.com.

The PhD seminars of the EAWE

Each autumn the EAWE organizes a PhD seminar: a seminar of small conference where PhD's present their plans, work, progress, results to colleague-PhD-researchers. This is an excellent opportunity to meet other PhD researchers, and to discuss your research. From 2011 on, the Summer School will be held jointly with the Seminars. The next PhD seminar is organized by NTNU in Trondheim, Norway, from 29.09.2010 until 01.10.2010.

The European Academy of Wind Energy

The EAWE is a co-operation on wind energy R&D of research institutes and universities in seven countries: Germany, Denmark, Greece, Netherlands, Spain, United Kingdom and Norway. The Academy is founded to formulate and execute joint R&D projects and to coordinate high quality scientific research and education on wind energy on a European level. The members include 30 entities, representing 7 EU countries and more than 80% of the long-term research activity in the field of Wind Energy.

The European Academy of Wind Energy aims at integrating the activities of the highest level academic and research institutes in Europe working on Wind Energy under a joint programme of long-term character. Particular attention is paid in spreading excellence through joint education and training activities.

Examples of these activities are the EAWE scientific conferences 'The Science of making Torque from Wind', the Scientific Track of the large EWEC conferences organized by the European Wind Energy Association, www.ewea.org, and the support for several proposals in the Marie Curie framework of the European Commission.

The PhD seminars and the Summer Schools constitute the second main activity of the EAWE. The training and education of specialists and system integrators becomes more and more important. At present, Europe is leading in the wind energy field, both with respect o the industry, installations and research. This is a unique position in a rapidly growing international market characterized by major development in technology, size and application. To maintain this position and to fully exploit the growth perspectives requires both continued technology development and education and training of a highly qualified workforce in Europe. If further RTD is one necessary component for the future success of Wind Energy, qualified human resource at all levels (technical and non-technical) is a second.

Contact information

The website www.eawe.eu gives you much more information.

EAWE School Schedule

17.05.2010	EAWE School	
08:30	Registration	
09:00	Introduction to Wind Energy: history, technology, market (1)	M. Kühn (UNIOL)
10:00	Coffee break	
10:30	Introduction to Wind Energy: history, technology, market (2)	M. Kühn (UNIOL)
12:00	Introduction to Meteorology: Wind resource assessment	L. Landberg (GH)
13:30	Lunch break	
15:00	Introduction to Meteorology: Forecasting	I. Martí (CENER)
16:30	Coffee break	
17:00	Introduction to rotor and drive train design (1)	M. Hansen (RISØDTU)
18:30	End of 1st day	
20:00	WAUDIT welcome dinner and party	All

18.05.2010	EAWE School	
08:30	Introduction to rotor and drive train design (2)	M. Hansen (RISØDTU)
10:00	Coffee break	
10:30	Introduction to loads, safety and standards (1)	J. Sørensen (AAO)
12:00	Introduction to loads, safety and standards (2)	J. Sørensen (AAO)
13:30	Lunch break	
15:00	Introduction to electrical components and grid connection (1)	S. Heier (UNIKS)
16:30	Coffee break	
17:00	Introduction to electrical components and grid connection (2)	S. Heier (UNIKS)
18:30	End of 2nd day	

19.05.2010	EAWE School	
08:30	Introduction to societal aspects of wind energy (1)	J. Zoellner (UNIMD)
10:00	Coffee break	
10:30	Introduction to societal aspects of wind energy (2)	P. Schweizer-Ries (UNIMD)
12:00	PhD research project management (1)	C. Ferreira (TUDELFT)
13:30	Lunch break	
15:00	PhD research project management (2)	C. Ferreira (TUDELFT)
16:30	Coffee break	
17:00	WAUDIT Workshop: individual project planning and design	WAUDIT participants
18:00	Board's meeting	WAUDIT Board
19:00	End of 3rd day	

WAUDIT School Schedule

20.05.2010	WAUDIT School	
08:30	Atmospheric Boundary Layer theory	G. Kallos (NTUA)
10:00	Coffee break	
10:30	Quality assurance of micro-scale meteorological models	M. Schatzmann (UNIHH)
12:00	Atmospheric turbulence at various scales	D. Schertzer (ENPC) J. Peinke (UNIOL)
13:30	Lunch break	
15:00	Visit to CENER's wind turbine test site	
18:30	End of 4th day	

21.05.2010	WAUDIT School	
08:30	Microscale numerical modeling of the ABL	N. Sørensen (RisoeDTU)
10:00	Coffee break	
10:30	Wind turbine wakes modeling	T. Chaviaropoulos (CRES)
12:00	Offshore meteorology	D. Heinemann (UNIOL)
13:30	Lunch break	
15:00	Introduction to measurement techniques	M. Courtney (RISØDTU)
16:30	Coffee break	
17:00	Wind tunnel modeling of ABL	S. Aubrun (U.Orleans)
18:30	End of 5th day	

The Partners of the European Academy of Wind Energy

Belgium
European Wind Energy Association (EWEA)

Denmark
Aalborg University
DHI Water & Environment
University of Denmark, DTU

Germany
Carl von Ossietzky University of Oldenburg - ForWind
Fraunhofer IWES
Leibniz Universität Hannover - ForWind
University of Kassel
University of Magdeburg
University of Stuttgart

Greece
CRES
National Technical University of Athens
University of Patras

Netherlands
Delft University of Technology
ECN
WMC

Norway
SINTEF, IFE and NTNU - Centre for Renewable Energy (SFFE)

Spain
CENER
Centro de Investigación de Recursos y Consumos Energéticos (CIRCE)
Instituto de Investigación de Energías Renovables (IIER)
ITC - Instituto Tecnológico de Canarias
Universidad Carlos III de Madrid (UC3M)
Universidad Politécnica de Madrid
Universidad Pública de Navarra

United Kingdom
CREST
Durham University
Imperial College London
Manchester Metropolitan University
STFC Rutherford Appleton Laboratory
The ICC at the University of Strathclyde
University of Manchester
University of Surrey