



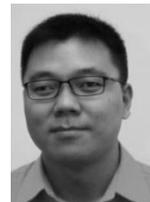
Zhe Chen

He is a full Professor with the Department of Energy Technology, Aalborg University, Denmark. He is the Leader of Wind Power System Research program at Department of Energy Technology, Aalborg University, the Danish Principle Investigator for Wind Energy of Sino-Danish Centre for Education and Research. He has led many research projects and has more than 400 publications. His research areas are power systems, power electronics, and electric machines, and his main current research interests include wind energy and modern power systems.

Jens Carsten Hansen



He has been employed at the Department of Wind Energy, Technical University of Denmark since 1982. Since 2000 he has been the Manager of Risø WindConsult and since 2002 he has been the head of the Wind Energy Systems, The work as a scientist has primarily been within technological research in wind power applications undertaken in parallel with activities as consultant in international wind power projects both as project manager and as expert, often in the feasibility study and planning phases for projects, but also in the implementation phase of pilot and demonstration projects.



Qiuwei Wu

He obtained the PhD degree from Nanyang Technological University, Singapore, in 2009, in Power System Engineering. He joined Centre for Electric Technology (CET), Department of Electrical Engineering, Technical University of Denmark (DTU) as a PostDoc in Nov. 2009, was an assistant professor from Nov. 2010 to August 2013, and has been an associate professor since September 2013 with the same centre.



Shuju Hu

He is an associate professor at IEECAS, supervisor for postgraduates, research group leader. He is mainly specialized in wind turbine control system, inverters, low voltage ride through technology and wind turbine ground testing technology, etc. He participated in research work of CAS Key Laboratory of Wind Energy Utilization, CAS Key Laboratory of Solar Thermal Energy and Photovoltaic Systems, Beijing Key Laboratory of Solar Power Generation.



Huajun Wang

He is a full Professor with Hebei University of Technology (HUT), China. He established the Wind Energy and Power Engineering Department in HTU. He chaired the national 863 project, Cascade Brushless Double Fed Wind Power Generator and Electrical Control System. He cooperated with many wind energy companies and completed the project, Hebei Province Wind Power Industry Development Technology Road Map.



Sino-Danish Center for Education and Research

Short Course

Wind Power Systems - In Theory and Practice

14-17, October 2014



Background of the course

The course will provide training and education in the field of wind power engineering, covering the electrical aspects of wind turbine systems, including electrical machines, power electronics and power systems.

The PhD course will include basic knowledge of electrical systems of wind power conversion systems, operation and control in power systems with high level wind power penetration. Some of the course contents are based on recently obtained research results.

The main topics are as follows:

- Overview of electrical systems of wind energy conversion systems
- Wind power generators
- Power electronics in wind power conversion system
- Wind turbine systems
- Offshore wind farms and electrical system optimization
- Operation and control of wind turbines and wind farms
- Wind turbines in power systems

Prerequisites:

General knowledge in engineering, preferably have a background at graduate level in electrical engineering.

Language:

English

Course Location:

Hebei University of Technology, Tianjin, China

Registration:

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Course Program

Day 1, 14th Oct., 09:00 – 16:30

- L1 Overview of energy system and wind power development
- L2 Basics of wind energy conversion systems
- L3 Drive train and generators
- L4 Power electronics

Day 2, 15th Oct., 09:00 – 16:30

- L5 Electrical system of variable speed constant frequency (VSCF) wind turbine (Shuju)
- L6 Deferent Structure Brushless Double Fed Generator in Wind Power System Application (Huajun)
- V Visit an industrial company (Huajun)

Day 3, 16th Oct., 09:00 – 16:30

- L7 Wind turbine systems and control
- L8 Grid code and wind power in power systems
- L9 Wind power impacts on power system small signal stability
- L10 Large Scale Wind Power Integration – Dynamic Modeling and Control (Qiuwei)

Day 4, 17th Oct., 09:00 – 16:30

- L11 Introduction of electricity market and wind power
- L12 Wind turbine and power system dynamics
- L13 Wind resources and wind power variability (Jens)
- L14 Home work/Exercise