Teaching portfolio

1. Teaching CV: A list of any lecturing and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD) as well as any external examiner tasks.

Courses/Lectures
- Hybrid Power Plants – Modeling, Control and Operation, PhD course 2020 (organizer), Aalborg University,
- Photovoltaic Power Systems - In Theory and Practice, PhD Course, Aalborg University
- Application-Oriented Modelling of Renewable Energy Sources, Conversion and Energy Storage Systems, PhD course since April 2017, Aalborg University;
- DSO challenges related to smart grid, Advantage Workshop, May 2015 (PhD level)
- Building the Bridge between Electrical Grid Control and Communication in Smart Grids, Aalborg University, 2014 and 2015 (PhD level)
- Smart Distribution Systems, Aalborg University, 2013, 2014 and 2015; (PhD/Continuing education level)
- Lectures on Power Quality in Distribution grids in PhD course "Interconnection Issues and Impact of Renewable Energy on Power Quality", Aalborg University, November 2014, (PhD level)
- Stability of Modern Power System, Erasmus programme, Brasov, Romania, May 2013 (PhD/Continuing education level)
- Invited lecture “Smart Energy Systems Laboratory A RT-HIL Framework For Research And Education”, 50th IEEE Anniversary, Lahore University, Pakistan

Workshop on “Model based Design for Smart Grid Applications using a Real-Time Co-Simulation Framework” (organizaer) in collaboration with Opal-RT, 16 Mar 2017, Aalborg University, Denmark;
- Tutorial on “PV Systems in Smart Grids”, 7th Solar Integration Workshop, 13 November 2016, Vienna, Austria;
- Knowledge Sharing in Vestas Wind systems on modeling and simulation of control, wind energy conversions systems and power systems in Power Factory and Matlab/Simulink (Continuing education level)
- Dispersed Generation of Electricity – PhD Course held each year since 2006 at Aalborg University, Denmark and in 2009, 2013 and 2014 in Tallinn, Estonia.
- Lectures on Grid Connection Requirements for Distributed Generation in PowerCamp Summer School, Århus 2009 (PhD level)
- Modelling and simulation of power converters using Matlab/Simulink – Industrial course for APC A/S, December 2008, Kolding, Denmark;
- Power Converters and Control for Renewable Energy Sources – Tutorial at PESC 2006 Conference, 18 June, Jeju, South-Korea ((PhD/Continuing education level)
- Electrical aspects of wind turbines - DAWE PhD School May 2006, Aalborg University, Denmark (PhD/Continuing education level)
- Electrical aspects of wind turbines - DAWE PhD School October 2005, Aalborg University, Denmark (PhD/Continuing education level)
- Wind Turbine Interaction with Power Systems – HIH Center, December 2004, Herning, Denmark (Continuing education level)
- Electrical aspects of wind turbines – DAWE PhD Summer School June 2004, Aalborg University, Denmark.
- Future Power Systems in Denmark, elective course (MSc level) since 2014
- Advanced Control of PV systems and Wind Turbines (3 modules), elective course on 3rd semester MSc level, Aalborg University, since 2020
- Wind Turbine Systems Technologies (5 Modules), 8th semester 2006-2009 (MSc level)
- Matlab/Simulink Course (5 Modules), 6th semester 2007- 2009 (BSc level)

Supervisor for 6 PhDs
Supervisor for more than 10 PhD guests

Supervision of MSc Thesis
•Operation and Control of Wind Power Plants with Electrolyzers, June 2022
•Renewable Park Control, June 2022
•Synchronization Stability of Inverter Based Resources during Faults on Low Voltage Grids, June 2022
•Energy Management for Household Prosumer, June 2021
•Advanced Power Oscillation Damping for a Wind Power Plant, June 2021
•Protection of Electrical Power Systems in Maritime Applications, June2020
•Smart Energy Management For Household Prosumer, June 2020
•Market participation of large-scale Hybrid power plant, June 2020
•Multiple Market Participation of Battery Storage System, June 2019
•Operation and Control of Hybrid Power Plants in LV Isolated Microgrid, June 2018
•Coordinated Frequency and Active Power Control of Hybrid Power Plants, An Approach to Fast Frequency Response, June 2018
•Loss Reduction in a Low Voltage Grid with Distributed Generation, October 2017
•Power and energy management of a residential hybrid photovoltaic-wind system with battery storage, June 2017
•Integration of Large Capacity PV Power and Measuring PV Hosting Capacity of North Cyprus MV Grid, June 2017

•Advanced Active Power and Frequency Control of Wind Power Plants, June 2017
•Monitoring of harmonic distortions in distribution grids and their effect on temperature of substation transformers, June 2015
•Controller Interaction Assessment between a Full-scale Converter Wind Turbine and a MMC-HVSC Transmission System, June 2015
•Wind Power Plant Control Optimisation, with Embedded Application of Wind Turbines and STATCOMs, June 2015
•Voltage Unbalance Compensation in the Distribution Grid through Distributed Generation, June 2015
•Investigations of relay protection systems in MV networks with large in-feed of distributed generation, June 2014
•Multiterminal DC Connection for Off-shore Wind Farms, June 2009
•Advanced Modelling and Control of Wind Power Systems, June 2009
•Fault Current Contribution from VSC-based Wind Turbines to the Grid, June 2008
•Real-Time Modelling Simulation and Control of Variable Speed Wind Turbines, June 2007
•Wind turbines optimised for VSC-DC transmission, June 2007

Supervision of semester projects at MSc level: more than 45

Supervision of semester projects at BSc level: 12

External Examinator in more than 20 project examinations

2. Study administration: A list of any study administration tasks, e.g. study board membership, head of studies or semester or course coordinator, accreditation, etc.

Semester coordinator for MSc Programme in Wind Power Systems (2006-2009)
Semester coordinator for MSc Programme in Wind Power Systems (2020 - .

3. University pedagogy qualifications: A list of any completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc.

“From Research to Business”, AAU Innovation, Aalborg University;
“Project Management for Researchers” Module A/Module B (April/August 2018), Peak Consulting;
“Writing successful collaborative projects for H2020” organized by Yellow Research, September 2015, Aalborg University;
“Introduction to Problem Based Learning – The AAU Way”, January 2003, Aalborg University;

4. Other qualifications: Conference attendance, editorials, presentations, etc. relating to education, 'University Teaching Day', etc.

“Coaching and Mentoring”, November 2011, course for Knowledge and Innovation Leaders in Vestas Wind Systems
“Catalysing Collaboration” September 2011. Internal course for Knowledge and Innovation Leaders, Vestas Wind Systems.
“Creative Innovation” October 2011. Internal course for Knowledge and Innovation Leaders, Vestas Wind Systems.
“NordPool – Building a secure market: Physical and Financial Markets”, August 2010.
“Design for Six-Sigma” – Yellow Belt Training. May 2010
“Frequency Control and Demand Side System Services in Systems with Large Scale Wind Power”, April 16, 2009, Risø/DTU, Denmark;
“Grid Integration of Wind Power”, First Workshop in Vestas Wind Power Programme, October 2008, Aalborg, Denmark;
“Recent developments in distributed generation”. Tutorial during the 19th International Conference on Electricity distribution (CIRED 2007), Vienna, Austria;
“Energy Efficiency- The role of power electronics” – Workshop organized by ECPE and EPE Associations on February 7th 2007 in Brussels, Belgium;
"Power Converters for Utility Applications”- Tutorial 37th IEEE Power Electronics Specialists Conference (PESC 06), Jeju, Korea;
ECPE Seminar - “Renewable Energies”, 9-10 February 2006, ISET eV, Kassel, Germany;
ECPE Seminar – “Advanced Power Conversion Concepts for Motor Drives”, 27-28 April 2005, Aalborg University, Denmark;
“Power Electronics for Renewable Energy Systems” - Tutorial IASTED EPS Conference, Krabi, Thailand, 18 – 21 April 2005;
“DIgSILENT – Modelling of Wind Turbines and Harmonic Analysis ” by Marcus Pöller, 22-24 March 2004, Aalborg University;
DigSILENT – Software Training” by Sebastian Achilles, 13-15 May 2003, Elsam-Engineering (Techwise), Fredericia;
“Wind Turbines and Their Integration”, DAWE Summer School, 11-15 August 2003, Denmark;
"Intelligent Drives" by Peter Vas, University of Aberdeen, Scotland, 4-6 April, 2001 Aalborg University;

5. Teaching activity development and teaching materials: A list of any contributions to the development of new modules, teaching materials, study programmes, e-learning,

collaboration with external business partners, etc.

elaborating teaching material to 10+ PhD/Industrial courses, 6+ MSc courses, 10+ workshops for industry, etc
Industry Contacts: Ørsted, Vattenfall, Vestas Wind Systems, Siemens-Gamesa, ABB Corporate Research, Regal Beloit Corporation, Areva Wind, Added Values, Dansk Energi, DEIF, Power Con, Senvion, Energinet, Thy-Mors Energi, Energi Midt, Norlys, Kamstrup, Fronius, Grid Data Gmbh, Resiltech, Xolta, COWI, Orbital, Opal-RT, Bachmann Gmbh, Rambøll, Aalborg Portland, Reno Nord, Evida, Tekniker (Spain), etc.
Academic contacts: DTU Elektro, DTU Wind Energy, Australian Energy Research Institute (University of New South Wales), University of Nottingham (UK), UDESC State University of Santa Catarina (Brazil), Imperial College London UK, Technical University of Catalunia (Spain), University of Castillia de la Mancha (Spain), University of Kentucky (USA), E-On Research Institute (Germany), ESTIA Research (France), IAIS Fraunhoffer (Germany), Indian Institute of Technology Jodhpur (India)

6. Teaching awards you may have received or been nominated for.

Nominated as Teacher of the Year in 2009 by Study Board of Energy

7. Personal reflections and initiatives: Here you may state any personal deliberations as regards teaching and supervision, any wishes and plans for further pedagogic development, plans for following up on feedback/evaluations from students, etc.

Type your answer here...

8. Any other information or comments.

Type your answer here...