Research areas for projects / master thesis

Responsible professor at DTU, 2. year University:

Name	Research area
Poul Erik Morthorst, Management Engineering, DTU	System Integration of wind power, Energy Markets, Energy Policies
Jens Nørkær Sørensen Wind Energy, DTU	Wind turbine technology, wind turbine design, Aerodynamics and Aero-acoustics, Non-linear Fluid Dynamics
Henrik Klinge Jacobsen Management Engineering, DTU	Power markets and wind, support instruments for wind Systems integration of wind power,
Klaus Skytte, DTU	Integration of renewable energy, support schemes, policy instruments, power market regulation
Marie Münster, DTU	Energy planning and renewable energy technologies. national energy modeling (Balmorel, EnergyPLAN, STREAM) with focus on Waste-to-Energy technologies producing heat, power and transport fuels and on analyses of the role of district heating in future energy systems
Pierre Pinson Electrical Engineering, DTU	Mathematical modeling and decision-making methods in the energy sector, large scale integration of renewable energies into power systems and electricity markets, stochastic process modeling, forecasting, optimization and decision-making subject to uncertainty
Gregor Giebel Wind Energy, DTU	Short-term forecasting of wind power, large-scale integration of wind power into electricity grids, and condition monitoring for wind turbines including standardisation within the IEC.
Niels Erik Clausen Wind Energy, DTU	Public acceptance of wind energy, System integration of wind power, wind power in cold climate
Joakim Holbøll Electrical engineering, DTU	Electrical components, lightning prevention, superconducting electrical machines, measurement techniques, generator technology
Anca D. Hansen Wind Energy, DTU	Grid integration, ancillary services, IEC standards, Integration of renewable energy
Nicolaos Antonio Cutululis Wind Energy, DTU	Control of wind power plants, HVDC systems, ancillary services, integration of large scale wind power

Co-supervisor at NTNU, 1st Year University

Electric power systems

Name	Research area
Prof. Kjetil Uhlen	Research within the fields of power system dynamics, operation and control. Interests are especially focused towards development of applications based on phasor measurements (PMUs) for monitoring and control purposes, and challenges related to large scale integration of RES in interconnected and isolated systems. Head of the Power Systems group at the department.
Prof. Magnus Korpås	Research within the fields of Energy Planning and Power Markets. Interests are especially focused towards integration of renewable energy in the energy system
Prof. Elisabetta Tedeschi	Power electronics for HVDC and HVAC transmission systems (including MMCs), offshore grids and isolated systems, wave energy converters, large scale (offshore) wind integration, control systems, etc

Prof. Olav Bjarte Fosso	Hydro power scheduling, Power system analysis – methods and algorithms, Integration and coordination of intermittent energy sources
Associate professor Vijay Vadlamudi	Reliability and Risk – based Power System Operation and Planning Practices, Probabilistic Methods Applied to Power System Analysis, Reliability – based Appraisal of Smart Grid Challenges and Realisation.
Associate professor Hossein Farahmand	Power system stability and control, Offshore wind energy integration, power system dynamic modeling and analysis, etc.
Adjunct professor Olimpo Anaya-Lara	Power system stability and control, Offshore wind energy integration, power system dynamic modeling and analysis, etc.
Adjunct prof. Kjell Sand	Transmission and distribution system analysis, quality of supply in power systems (reliability, power quality), Smart-grids, microgrids, technical- economical planning of power system, power system standardization, economical regulation and benchmarking of grid monopolies, powert system ICT. Project manager National Smart Grid lab, Scientfic manager The Norwegian Smartgrid Centre, Scientific Manager Centre for Intelligent Electricity Distribution - CINELDI

Electric power technology

Name	Research area
Prof. Hans Kristian Høidalen	Power system transients, stress analysis, power system protection. Project leader of ProSmart. Group leader of Power Technology
Prof. Erling Ildstad	High voltage insulation, cable technology, diagnostic testing and condition assessment
Prof. Kaveh Niayesh	Current interruption and limitation in power grids, circuit breaker and switchgear technology, power system transients, condition assessment of high voltage apparatus, gaseous and vacuum discharges, high current and high voltage testing methods, pulsed power technology.
Prof. Robert Nilssen	Field calculation, design of electrical machines and other power components. Design optimization. Numerical modelling of electromagnetic fields using FEM.
Prof. Arne Nysveen	Analysis and design om electromagnetic power equipment and installations. Numerical analysis using finite elements. Applications focused on hydropower equipment and subsea installations. Responsible for research on generators and turbines in FME HydroCen
Associate professor Eilif Hugo Hansen	Light and lighting, Low voltage installations, Intelligent Building Installations, Intelligent Street Lighting, Lighting in Fish Farming
Associate professor Frank Mauseth	High voltage insulation technique for energy efficient and environmental friendly electric power transfer and distribution. Important topics are modelling and experimental testing of design criteria associated with ageing mechanisms and electric withstand strength of different high voltage insulation materials.
Associate professor Dimosthenis Peftitsis	Power electronics, design of power electronic converters, wide bandgap power semiconductors (e.g. SiC and GaN), gate and base drivers design, hybrid and solid-state DC breakers, high-efficiency design of power electronics, high-temperature design, reliability of power electronics.
Adjunct associate prof. Eivind Solvang	Risk based asset management, cost-benefit analysis of maintenance and reinvestments, methods and tools for estimation of remaining useful life, failure probability and technical-economic risk based on the technical condition of components, distribution system planning
Prof. Irina Oleinikova	Protection in power systems
Associate professor Mohammad Amin	power electronics application to power system, distributed generation, renewable energy integration, HVDC transmission, FACTS, microgrid, smart grids, hybrid or fully electric vehicles, robust control theory for power electronics system, process control, and embedded systems.
Associate professor Steve Völler	sustainable energy systems - this includes electric car and other zero emission cars, energy storage, energy markets, energy system analysis, smart grids, solar energy, wind energy ...