Jacob Østergaard - DTU Orbit (04/02/2018)

Jacob Østergaard
Professor, Head of Center
Department of Electrical Engineering
Center for Electric Power and Energy

Postal address:
Elektrovej
325, 125
2800
Kgs. Lyngby
Denmark
Email: joe@elektro.dtu.dk
Phone: 45253501
Mobile: 25130501
Web address: http://www.dtu.dk/Service/Telefonbog/Person?id=7328
Web: http://www.dtu.dk/Service/Telefonbog/Person?id=7328

Publications:

Enhanced Voltage Control of VSC-HVDC Connected Offshore Wind Farms Based on Model Predictive Control
Publication: Research - peer-review › Journal article – Annual report year: 2018

An Improved On-line Contingency Screening for Power System Transient Stability Assessment
Publication: Research - peer-review › Journal article – Annual report year: 2017

Coordinated Control Strategies for Offshore Wind Farm Integration via VSC-HVDC for System Frequency Support
Publication: Research - peer-review › Journal article – Annual report year: 2017

Coordinated Voltage Control Scheme for VSC-HVDC Connected Wind Power Plants
Publication: Research - peer-review › Journal article – Annual report year: 2017

Detecting Topological Errors with Pre-Estimation Filtering of Bad Data in Wide-Area Measurements
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Real-Time Trading Strategies of Proactive DISCO with Heterogeneous DG Owners.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Super-Positioning of Voltage Sources for Fast Assessment of Wide-Area Thévenin Equivalents
Publication: Research - peer-review › Journal article – Annual report year: 2017

Towards fully renewable energy systems - Experience and trends in Denmark
Publication: Research - peer-review › Journal article – Annual report year: 2016

Demand response in a market environment
Publication: Research › Ph.D. thesis – Annual report year: 2016

Efficient Control of Active Transformers for Increasing the PV Hosting Capacity of LV Grids
Publication: Research - peer-review › Journal article – Annual report year: 2016

Efficient Control of Energy Storage for Increasing the PV Hosting Capacity of LV Grids
Publication: Research - peer-review › Journal article – Annual report year: 2016
Hardware-in-the-loop (HIL) Test of Demand as Frequency Controlled Reserve (DFR)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Improved Thévenin equivalent methods for real-time voltage stability assessment
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Methods and Strategies for Overvoltage Prevention in Low Voltage Distribution Systems with PV
Publication: Research - peer-review › Journal article – Annual report year: 2016

Ranking Method for Peak-Load Shifting Considering Different Types of Data
Publication: Research - peer-review › Journal article – Annual report year: 2017

Real-Time Procurement Strategies of a Proactive Distribution Company with Aggregator-Based Demand Response
Publication: Research - peer-review › Journal article – Annual report year: 2016

Real-time remedial action against aperiodic small signal rotor angle instability
Publication: Research - peer-review › Journal article – Annual report year: 2016

Trading Strategies for Distribution Company with Stochastic Distributed Energy Resources.
Publication: Research - peer-review › Journal article – Annual report year: 2016

A multi-agent system for distribution grid congestion management with electric vehicles
Publication: Research - peer-review › Journal article – Annual report year: 2015

Application of MV/LV Transformers with OLTC for Increasing the PV Hosting Capacity Of LV Grids
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Costs of Residential Solar PV Plants in Distribution Grid Networks
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Critical machine cluster identification using the equal area criterion
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Derivation and application of sensitivities to assess transient voltage sags caused by rotor swings
Publication: Research - peer-review › Journal article – Annual report year: 2015

Evaluation of HVDC interconnection models for considering its impact in real-time voltage stability assessment
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Fault Ride-Through Capability Enhancement of VSC HVDC connected Offshore Wind Power Plants
Publication: Research - peer-review › Journal article – Annual report year: 2015

Improved method for considering PMU's uncertainty and its effect on real-time stability assessment methods based on Thévenin equivalent
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Improved method for considering PMU's uncertainty and its effect on real-time stability assessment methods based on Thévenin equivalent
Publication: Research - peer-review › Paper – Annual report year: 2015

Integrated smart infrastructures
Publication: Research - peer-review › Book chapter – Annual report year: 2015
Real-time Distributed Economic Dispatch for Distributed Generation Based on Multi-Agent System
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Review of Real-time Electricity Markets for Integrating Distributed Energy Resources and Demand Response
Publication: Research - peer-review › Journal article – Annual report year: 2015

System Frequency as Information Carrier in AC Power Systems
Publication: Research - peer-review › Journal article – Annual report year: 2015

Thevenin Equivalent Method for Dynamic Contingency Assessment
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Uncertainty-averse TRANSCO planning for accommodating renewable energy in CO2 reduction environment
Publication: Research - peer-review › Journal article – Annual report year: 2015

Voltage rise mitigation for solar PV integration at LV grids: Studies from PVNET. dk
Publication: Research - peer-review › Journal article – Annual report year: 2015

Voltage unbalance mitigation in LV networks using three-phase PV systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Wind farms generation limits and its impact in real-time voltage stability assessment
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Integrating Autonomous Load Controllers in Power Systems
Publication: Research › Ph.D. thesis – Annual report year: 2015

A Decentralized Storage Strategy for Residential Feeders with Photovoltaics
Publication: Research - peer-review › Journal article – Annual report year: 2014

A Multi-objective Model for Transmission Planning Under Uncertainties
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

A Practical Approach for Parameter Identification with Limited Information
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

A Scenario-Based Approach for Energy Storage Capacity Determination in LV Grids with High PV Penetration
Publication: Research - peer-review › Journal article – Annual report year: 2014

Computation of Steady State Nodal Voltages for Fast Security Assessment in Power Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Control strategies for power distribution networks with electric vehicles integration.
Publication: Research › Ph.D. thesis – Annual report year: 2014

Coordinated Charging of Electric Vehicles for Congestion Prevention in the Distribution Grid
Publication: Research - peer-review › Journal article – Annual report year: 2013

Day-Ahead Congestion Management in Distribution Systems through Household Demand Response and Distribution Congestion Prices
Development of Energy and Reserve Pre-dispatch and Re-dispatch Models for Real-time Price Risk and Reliability Assessment
Publication: Research - peer-review › Journal article – Annual report year: 2014

Discussion of "Combined Nonparametric Prediction Intervals for Wind Power Generation"
Publication: Research - peer-review › Journal article – Annual report year: 2014

Distributed Generation vs. Centralized Generation
Publication: Research › Sound/Visual production (digital) – Annual report year: 2015

Electric vehicle integration in a real-time market
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Evaluation of enhancements to Thevenin equivalent based methods for real-time voltage stability assessment
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Fault Diagnosis for Electrical Distribution Systems using Structural Analysis
Publication: Research - peer-review › Journal article – Annual report year: 2014

FLECH - A Danish market solution for DSO congestion management through DER flexibility services
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Future Integration of Wind in the Energy System: and the role of state-of-art experimental facilities
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Generating Geospatially Realistic Driving Patterns Derived From Clustering Analysis Of Real EV Driving Data
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Impact of equipment failures and wind correlation on generation expansion planning
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MOPSO-based multi-objective TSO planning considering uncertainties
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New Teaching Environments Near Real-World-Like Laboratories for Power Engineering
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

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Opfølgning på Klima- og Energiministerens Smart Grid Strategi: Forskning, udvikling og demonstration
Publication: Research › Sound/Visual production (digital) – Annual report year: 2014

Power Hardware In The Loop Validation of Fault Ride Through of VSC HVDC Connected Offshore Wind Power Plants
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Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

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Extension of market concept with market-driven optimisation of distribution system operation
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Generation Expansion Planning Considering Integrating Large-scale Wind Generation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

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Impact and Cost Evaluation of Electric Vehicle Integration on Medium Voltage Distribution Networks
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Impact of Model Detail of Synchronous Machines on Real-time Transient Stability Assessment
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Intelligent Electric Vehicle Integration - Domain Interfaces and Supporting Informatics
Publication: Research › Ph.D. thesis – Annual report year: 2013

Islanding Control Architecture in future smart grid with both demand and wind turbine control
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Multilevel Coordination in Smart Grids for Congestion Management of Distribution Grid
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Optimization and control method for smart charging of EVs facilitated by Fleet operator: Review and classification
Publication: Research - peer-review › Journal article – Annual report year: 2013

Policies and Initiatives for Carbon Neutrality in Nordic
Publication: Research - peer-review › Journal article – Annual report year: 2012

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Publication: Research › Sound/Visual production (digital) – Annual report year: 2013

Power oscillation damping capabilities of wind power plant with full converter wind turbines considering its distributed and modular characteristics
Publication: Research - peer-review › Journal article – Annual report year: 2013

Residue-based evaluation of the use of wind power plants with full converter wind turbines for power oscillation damping control
Publication: Research - peer-review › Journal article – Annual report year: 2014

Smart Demand for Frequency Regulation: Experimental Results
Publication: Research - peer-review › Journal article – Annual report year: 2012
SmartGrid aktiviteterne på Bornholm
Publication: Research › Sound/Visual production (digital) – Annual report year: 2013

Storage Application in Smart Grid with High PV and EV Penetration
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Suitability of voltage stability study methods for real-time assessment
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The Future Organization of Danish Electricity Market for Integrating DERs - a View of FlexPower Project
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The smart grid research network: Road map for Smart Grid research, development and demonstration up to 2020
Publication: Research - peer-review › Report – Annual report year: 2013

Vedvarende energi, Smart Grids og Japan
Publication: Research › Sound/Visual production (digital) – Annual report year: 2013

Wide-Area Assessment of Aperiodic Small Signal Rotor Angle Stability in Real-Time
Publication: Research - peer-review › Journal article – Annual report year: 2013

World-class experimental platform for Smart Grid development
Publication: Research › Sound/Visual production (digital) – Annual report year: 2013

Addressing the security of a future sustainable power system: The Danish SOSPO project
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Advanced Control Strategy of DFIG Wind Turbines for Power System Fault Ride Through
Publication: Research - peer-review › Journal article – Annual report year: 2012

A Generic Danish Distribution Grid Model for Smart Grid Technology Testing
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Agent based Particle Swarm Optimization for Load Frequency Control of Distribution Grid
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Analysis of thevenin equivalent network of a distribution system for solar integration studies
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Coordinated Control Scheme of Battery Energy Storage System (BESS) and Distributed Generations (DGs) for Electric Distribution Grid Operation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Coordinated Frequency Control of Wind Turbines in Power Systems with High Wind Power Penetration
Publication: Research › Ph.D. thesis – Annual report year: 2013

Day-ahead tariffs for the alleviation of distribution grid congestion from electric vehicles
Publication: Research - peer-review › Journal article – Annual report year: 2012

Determination of PV Penetration in LV Networks Considering Stochastic Behavior of Loads and PVs
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013
Ecogrid EU - a large scale smart grids demonstration of real time market-based integration of numerous small DER and DR
Publication: Research › Article in proceedings – Annual report year: 2012

Efficient determination of distribution tariffs for the prevention of congestion from EV Charging
Publication: Research › Article in proceedings – Annual report year: 2012

Evaluation of Energy Storage System to Support Danish Island of Bornholm Power Grid
Publication: Research › Article in proceedings – Annual report year: 2012

Frequency Stabilizing Scheme for a Danish Island Grid
Publication: Research › Article in proceedings – Annual report year: 2012

Identification of Critical Transmission Limits in Injection Impedance Plane
Publication: Research › Journal article – Annual report year: 2012

Impact of Wind Power Plants with Full Converter Wind Turbines on Power System Small-Signal Stability: Inherent Characteristics and Potential for Power Oscillation Damping Control
Publication: Research › Ph.D. thesis – Annual report year: 2013

Impact Study of Electric Vehicle (EV) Integration on Low Voltage (LV) Grids
Publication: Research › Article in proceedings – Annual report year: 2012

Implementation of IEC Generic Model Type 1A using RTDS
Publication: Research › Article in proceedings – Annual report year: 2012

Implementation of IEC Generic Model Type 1 Wind Turbine Generators using RTDS
Publication: Research › Paper – Annual report year: 2012

Investigation of the Adaptability of Transient Stability Assessment Methods to Real-Time Operation
Publication: Research › Article in proceedings – Annual report year: 2012

Policies and initiatives for carbon neutrality in nordic heating and transport systems
Publication: Research › Article in proceedings – Annual report year: 2012

Power-Hardware-in-the-Loop Test of VSC HVDC Connection for Offshore Wind Power Plants
Publication: Research › Sound/Visual production (digital) – Annual report year: 2012

Prediction and optimization methods for electric vehicle charging schedules in the EDISON project
Publication: Research › Article in proceedings – Annual report year: 2012

Real-Time Analysis of an Active Distribution Network - Coordinated Frequency Control for Islanding Operation: Coordinated Frequency Control for Islanding Operation
Publication: Research › Ph.D. thesis – Annual report year: 2012

Real-Time Hardware-in-the-Loop Testing for Digital Controllers
Publication: Research › Article in proceedings – Annual report year: 2012

Real time Intelligent Control Laboratory (RT-ICL) of PowerLabDK for smart grid technology development
Publication: Research › Article in proceedings – Annual report year: 2012
Responsive demand to mitigate slow recovery voltage sags
Publication: Research - peer-review › Journal article – Annual report year: 2011

Small-Signal Stability of Wind Power System With Full-Load Converter Interfaced Wind Turbines
Publication: Research - peer-review › Journal article – Annual report year: 2012

Spot Pricing When Lagrange Multipliers Are Not Unique
Publication: Research - peer-review › Journal article – Annual report year: 2012

The Impact of Dynamic Electricity Tariff on Long-run Incremental Cost
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Using H∞ to design robust POD controllers for wind power plants
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Application of SmartGrid in Photovoltaic Power Systems on the Island of Bornholm–PVNET.dk
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Assessment of emission trading impacts on competitive electricity market price
Publication: Research - peer-review › Journal article – Annual report year: 2011

Combined scheduling of electricity and heat in a microgrid with volatile wind power
Publication: Research › Journal article – Annual report year: 2011

Controlling Price-Responsive Heat Pumps for Overload Elimination in Distribution Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Demand as Frequency Controlled Reserve
Publication: Research - peer-review › Journal article – Annual report year: 2011

Demand as Frequency Controlled Reserve: Implementation and practical demonstration
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Designing incentive market mechanisms for improving restructured power system reliabilities
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Development of Early Warning Methods for Electric Power Systems
Publication: Research › Ph.D. thesis – Annual report year: 2011

Electric Vehicle (EV) Charging Management with Dynamic Distribution System Tariff
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Electric vehicles in Danish power system with large penetration of wind power
Publication: Research - peer-review › Journal article – Annual report year: 2011

Electric Vehicles in future market models
Publication: Research › Report – Annual report year: 2011

Energy storage in future power systems
Publication: Research - peer-review › Book chapter – Annual report year: 2011
Expected energy production evaluation for photovoltaic systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Feasibility study of 5MW superconducting wind turbine generator
Publication: Research - peer-review › Journal article – Annual report year: 2011

High Temperature Superconductor Machine Prototype
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Hovedrapport for Smart Grid Netværkets arbejde
Publication: Research › Report – Annual report year: 2011

Impact Study of Electric Vehicle (EV) Integration on Medium Voltage (MV) Grids
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Induced Torques on Synchronous Generators from Operation of Wind Power Plant based on Full-Load Converter Interfaced Wind Turbines
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Information and Communications Systems for Control-by-Price of Distributed Energy Resources and Flexible Demand
Publication: Research - peer-review › Journal article – Annual report year: 2011

Model Development for Power System Analysis with a Substantial Wind Energy Capacity Installed in the Nordic grid
Publication: Research › Report – Annual report year: 2011

Modeling and Control for Islanding Operation of Active Distribution Systems
Publication: Research - peer-review › Book chapter – Annual report year: 2011

Multi-agent based controller for islanding operation of active distribution networks with distributed generation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

New Real-Time Market Facilitating Demand-Side Resources for System Balancing
Publication: Research - peer-review › Journal article – Annual report year: 2011

Optimal charging schedule of an electric vehicle fleet
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Oscillatory Stability and Eigenvalue Sensitivity Analysis of A DFIG Wind Turbine System
Publication: Research - peer-review › Journal article – Annual report year: 2011

Potential Analysis of Electric Vehicle (EV) Grid Integration
Publication: Research › Report – Annual report year: 2011

Potential Analysis of Regulating Power from Electric Vehicle (EV) Integration in Denmark
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Power-Hardware-In-the-Loop (PHIL) Test of VSC-based HVDC connection for Offshore Wind Power Plants (WPPs)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011
DTU PMU Laboratory Development - Testing and Validation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Estimation of Eastern Denmark's Electromechanical Modes from Ambient Phasor Measurement Data
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Frequency Control in Power Systems with High Wind Power Penetration
Publication: Research › Article in proceedings – Annual report year: 2010

Grid Integration Issues for Large Scale Wind Power Plants (WPPs)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Hopf bifurcation and eigenvalue sensitivity analysis of doubly fed induction generator wind turbine system
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Integration of electric drive vehicles in the Danish electricity network with high wind power penetration
Publication: Research - peer-review › Journal article – Annual report year: 2010

Investigation of PMU performance under TVE criterion
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Modeling of Electric Vehicles (EVs) for EV Grid Integration Study
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

On Small-Signal Stability of Wind Power System with Full-Load Converter Interfaced Wind Turbines
Publication: Research › Article in proceedings – Annual report year: 2010

Reactive Power Capability of Unified DFIG for Wind Power Generation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Reactive power control with CHP plants - A demonstration
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Redesign Electricity Market for the Next Generation Power System of Renewable Energy and Distributed Storage Technologies
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Simulation embedded artificial intelligence search method for supplier trading portfolio decision
Publication: Research - peer-review › Journal article – Annual report year: 2010

Superconducting wind turbine generators
Publication: Research - peer-review › Journal article – Annual report year: 2010

Superconducting wind turbine generators
Publication: Research › Conference abstract for conference – Annual report year: 2010

Superconducting wind turbines
Publication: Research › Conference abstract for conference – Annual report year: 2010
Synchronous Generator Excitation System Model Validation Using PMU Signal
Publication: Research › Report – Annual report year: 2010

System Integration of Distributed Energy Resources
Publication: Research › Ph.D. thesis – Annual report year: 2010

Use of demand response in electricity markets: An overview and key issues
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Application of Advanced Particle Swarm Optimization Techniques to Wind-thermal Coordination
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Battery Energy Storage Technology for power systems-An overview
Publication: Research - peer-review › Journal article – Annual report year: 2009

Centre for Electric Technology: Mission - Vision - Strategy
Publication: Research › Report – Annual report year: 2009

Control Mechanism and Security Region for Intentional Islanding Transition
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Day-Ahead Self-Scheduling of Thermal Generator in Competitive Electricity Market Using Hybrid PSO
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Design study of 10 kW superconducting generator for wind turbine applications
Publication: Research - peer-review › Journal article – Annual report year: 2009

Electric Vehicles in Power Systems with 50% Wind Power Penetration: The Danish Case and the EDISON programme
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

EV Portfolio Management and Grid Impact Study
Publication: Research › Report – Annual report year: 2009

Flexibility in the distribution system
Publication: Research - peer-review › Book chapter – Annual report year: 2009

Future Challenges of the Danish Power System: Results of Ecogrid.dk - Phase 1
Publication: Research › Article in proceedings – Annual report year: 2009

Hopf Bifurcation and Eigenvalue Sensitivity Analysis of Doubly Fed Induction Generator Wind Turbine System
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

How can energy companies benefit from public private partnerships?
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

Hybrid Particle Swarm Optimization based Day-Ahead Self-Scheduling for Thermal Generator in Competitive Electricity Market
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Mitigation of Voltage Sags Through Distributed Demand Side Technology
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009
Partnership for intelligent energy systems
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

PMU Applications - From Situation Awareness to Blackout Prevention
Publication: Research - peer-review › Paper – Annual report year: 2009

PMU Frequency Data Processing for A Planned Islanding Operation in Bornholm
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

Reactive power and voltage control based on general quantum genetic algorithms
Publication: Research - peer-review › Journal article – Annual report year: 2009

Renewable Energy Generation in India: Present Scenario and Future Prospects
Publication: Research › Article in proceedings – Annual report year: 2009

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Publication: Research › Report – Annual report year: 2009

Small-Signal Stability Analysis of Full-Load Converter Interfaced Wind Turbines
Publication: Research › Article in proceedings – Annual report year: 2009

Smart Demand for Improving Short-term Voltage Control on Distribution Networks
Publication: Research - peer-review › Journal article – Annual report year: 2009

State-estimation of wind power system of the Danish island of Bornholm
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Study of variable speed wind turbines capability for frequency response
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Towards a Danish power system with 50% wind: — Smart grids activities in Denmark
Publication: Research › Article in proceedings – Annual report year: 2009

Towards a new grid infrastructure: Denmark as a full-scale laboratory
Publication: Research › Book chapter – Annual report year: 2009

Using Service Oriented Architecture in a Generic Virtual Power Plant
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Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

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Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

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Design study of superconducting 10 kW demonstration generator for wind turbine applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

EcoGrid: 50% wind power in the electricity system
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Publication: Research › Report – Annual report year: 2008

Electric Vehicles for Improved Operation of Power Systems with High Wind Power Penetration
Publication: Research › Article in proceedings – Annual report year: 2008

Estimation of Power Quality Indicators During a Real Wind Farm Islanding Experiment
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Evaluating Frequency Quality of Nordic System using PMU data
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Evaluation of a Generic Virtual Power Plant Framework Using Service Oriented Architecture
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

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Future steps toward a Danish power system with 50% wind power
Publication: Research › Report – Annual report year: 2008

Identification of problems when using long high voltage AC cable in transmission system II: Resonance & Harmonic resonance
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

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Publication: Communication › Sound/Visual production (digital) – Annual report year: 2008

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The electric power system in Denmark, a vision for year 2025
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Theoretical evaluation of a generic virtual power plant framework using service oriented principles
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STRATEGIC RESEARCH AGENDA FOR EUROPE'S ELECTRICITY NETWORKS OF THE FUTURE: European Technology Platform SmartGrids
Publication: Research › Report – Annual report year: 2007

System grounding of wind farm medium voltage cable grids
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

The future smart energy system in Europe
Publication: Research › Sound/Visual production (digital) – Annual report year: 2007

Tracking of Power Quality Indicators during Wind Farm Islanding Experiment
Publication: Research › Article in proceedings – Annual report year: 2007

Forskningsplan for Center for Elteknologi
Publication: Research › Report – Annual report year: 2006

Technical challenges to energy systems' operation and markets
Publication: Research - peer-review › Book chapter – Annual report year: 2006

Uddannelsesplan for elområdet
Publication: Research › Report – Annual report year: 2006

Vision and Strategy for Europe's Electricity Networks of the Future: European Technology Platform SmartGrids
Publication: Research › Report – Annual report year: 2006

Center for Elteknologi, Mission, Vision, Strategi
Publication: Research › Report – Annual report year: 2005

Koordineret netudbygning af 30-150 kV net
Publication: Research › Report – Annual report year: 2005

Stationsprognose 2004
Publication: Research › Report – Annual report year: 2005

System control and communication
Publication: Research - peer-review › Book chapter – Annual report year: 2005
Teknisk forskrift for termiske kraftværker på 1,5 MW eller mere
Publication: Research - peer-review › Report – Annual report year: 2005

Elteknologi
Publication: Education › Compendium/lecture notes – Annual report year: 2004

Forplantning af hurtige spændingsændringer i nettet: Målinger i transmissions- og distributionsnettet fra Thy-Mors
Publication: Research › Report – Annual report year: 2004

High temperature Superconducting Cables
Publication: Research - peer-review › Book chapter – Annual report year: 2004

Ny Mvar-ordning
Publication: Research › Report – Annual report year: 2004

Operation experiences with a 30 kV/100 MVA high temperature superconducting cable system
Publication: Research - peer-review › Journal article – Annual report year: 2004

Termiske kraftværker større end 2 MW.: Sammenfatning af eksisterende administrationsgrundlag
Publication: Research › Report – Annual report year: 2004

High temperature superconducting power cable system installed in a utility power network
Publication: Research - peer-review › Article in proceedings – Annual report year: 2003

High temperature superconducting power cable system installed in a utility power network: Nordic Insulation Symposium
Publication: Research - peer-review › Book – Annual report year: 2003

Modellering af elforbrug til netanalyse
Publication: Research › Report – Annual report year: 2003

Stationsprognoser: Delprojekt 2 - prognosemodel
Publication: Research › Report – Annual report year: 2003

Superconducting power cables and other superconducting technologies for the electric power system - status and prospects
Publication: Research › Article in proceedings – Annual report year: 2003

Superledende kabelinstallation på Amager koblingsstation
Publication: Research › Report – Annual report year: 2003

Superledende kabelinstallation på Amager koblingsstation - baggrundsrapport
Publication: Research › Report – Annual report year: 2003

A New Concept for Superconducting DC Transmission from a Wind Farm
Publication: Research - peer-review › Journal article – Annual report year: 2002

A new concept for superconducting DC transmission from a wind turbine park
Publication: Research - peer-review › Journal article – Annual report year: 2002
Design, installation and operation of the world’s first high temperature superconducting power cable in a utility power network
Publication: Research › Article in proceedings – Annual report year: 2002

First operation experiences from a 30 kV 104 MVA HTS power cable installed in a utility substation
Publication: Research - peer-review › Journal article – Annual report year: 2002

Results from the Danish high temperature superconducting power cable project
Publication: Research - peer-review › Journal article – Annual report year: 2002

Stationsprognoser: Delprojekt 1 - datagrundlag
Publication: Research › Report – Annual report year: 2002

Teknologiundersøgelse for superledende komponenter: Aktiviteter i Japan
Publication: Research › Report – Annual report year: 2002

Teknologiundersøgelse for superledende komponenter
Publication: Research - peer-review › Report – Annual report year: 2002

Applications of HTS Fault Current Limiters in the Danish Utility Network
Publication: Research - peer-review › Conference article – Annual report year: 2001

Can we delay the replacement of this component? - an asset management approach to the question [for electric utilities]
Publication: Research - peer-review › Article in proceedings – Annual report year: 2001

Energy losses of superconducting power transmission cables in the grid
Publication: Research - peer-review › Journal article – Annual report year: 2001

Test results of full-scale high temperature superconductors cable models destined for a 36 kV, 2 kA(rms) utility demonstration
Publication: Research - peer-review › Journal article – Annual report year: 2001

AC-losses in superconducting power cables
Publication: Research - peer-review › Book chapter – Annual report year: 2000

Power applications for superconducting cables
Publication: Research - peer-review › Journal article – Annual report year: 2000

SC Power leads and cables - Nominal Current Test Performance of 2 kA-Class High-Tc Superconducting Cable Conductors and Its Implications for Cooling Systems for Utility Cables
Publication: Research - peer-review › Journal article – Annual report year: 2000

Utility survey of requirements for a HTS fault current limiter
Publication: Research - peer-review › Article in proceedings – Annual report year: 1999

Application aspect of HTS Fault Current Limiter in a 10 kV grid system
Publication: Research - peer-review › Journal article – Annual report year: 1999

Kortslutningsstramme i superledende kabler
Publication: Research › Report – Annual report year: 1999
Loss and Inductance Investigation in Superconducting Cable Conductors
Publication: Research - peer-review › Article in proceedings – Annual report year: 1999

MAINTENANCE AND REPLACEMENT DECISION SUPPORT SYSTEM
Publication: Research › Article in proceedings – Annual report year: 1999

Power applications for superconducting cables in Denmark
Publication: Research - peer-review › Journal article – Annual report year: 1999

Superleddende kabler i dansk elforsyning
Publication: Research › Report – Annual report year: 1999

Superleddende kabelledere med variabel viklevinkel
Publication: Research › Report – Annual report year: 1998

Superleddende kabelledere med variabel viklevinkel og endelig lagtykkelse: Bidrag til tidligere udgivne rapport TR 400
Publication: Research › Report – Annual report year: 1998

VefoNet prototype Ila – Software og baggrundsmateriale
Publication: Research › Report – Annual report year: 1998

VefoNet - Vedligeholdelses- og fornyelsesmodeller for distributionsnet
Publication: Research › Report – Annual report year: 1998

Beregning af 10 kV superleddende prototype kabel
Publication: Research › Report – Annual report year: 1997

En vejledning i brug af Alternative Transient Program (ATP-EMTP)
Publication: Research › Report – Annual report year: 1997

Superconducting power cables in Denmark - a case study
Publication: Research - peer-review › Journal article – Annual report year: 1997

AC-tabsmodeller for superleddende kabelledere
Publication: Research › Report – Annual report year: 1996

Bedømmelsessystem for systematisk vedligeholdelse af 10 kV stationær og kabelnet: Komitérapport 106
Publication: Research › Report – Annual report year: 1996

Karakteristika for superleddende kabler - elektriske egenskaber, økonomi, nedkøling og quench
Publication: Research › Report – Annual report year: 1996

Planlægning med usikkerheder
Publication: Education › Compendium/lecture notes – Annual report year: 1996

Superleddende strømbegrænsere
Publication: Research › Report – Annual report year: 1996

Beskyttelse af mellemspændingsanlaeg
Publication: Education › Compendium/lecture notes – Annual report year: 1995
Fællesregulativet, fasekompensering mv.
Publication: Education › Compendium/lecture notes – Annual report year: 1995

Opbygning af beskyttelse fra 10 kV-samleskinne til hovedfordelingstavle
Publication: Education › Compendium/lecture notes – Annual report year: 1995

Direkte drevet generator til vindkraftformål
Publication: Research › Report – Annual report year: 1994

Direkte drevet generator til vindkraftformål, beregning af en direkte drevet asynkronmaskine
Publication: Research › Report – Annual report year: 1994

Nettilsluttet solcelleanlæg, energianalyse på solcelleanlæg vha. LMG20 og Labtech Notebook
Publication: Research › Report – Annual report year: 1993

Projects:

Innovative Methods for Optimal Operation of Multiple HVDC Connections and Grids
Project

EnergyLab Nordhavn - New Urban Energy Infrastructures
Project

Synchronous Condensers APPlication in Low Inertia Systems
Project

Optimal Voltage Control of Distribution Networks with High Penetration of Distributed Energy Resources (DER\_s)
Project: PhD

Static Security Assessment and PMU Data Validation
Project: PhD

Real-Time Assessment of Voltage Stability (tentative)
Project: PhD

Ensure a reliable operation of a sustainable future system
Project

Optimal sizing and control of balancing power in the future European system considering transmission system constraints
Project

Modern Electricity Distribution Grids with High Share of Solar Energy
Project: PhD

Secure Operation of Sustainable Power Systems
Project

Electricity market design for distributed energy resources and flexible demand
Project: PhD
On-line Dynamic Security Assessment in Power Systems
Project: PhD

EcoGrid EU - Large scale Smart Grids demonstration of real time market-based integration of DER and DR
Project

Application of smart grid in photovoltaic power systems
Project

Electric vehicle integration in a real-time market
Project: PhD

Network and control of future intelligent power system
Project: PhD

Integrated Communication and Electric Power Distribution System Design
Project: PhD

PMU application project : Model verification of Synchronous Generator Excitation System via PMU signal
Project

Intelligent Electric Vehicle Integration - Domain Interfaces and Supporting Informatics
Project: PhD

Real-Time Analysis of an Active Distribution Network - Coordinated Frequency Control for Islanding
Project: PhD

Project: PhD

Communication Requirements for Flexible Control of Distr. Pow. Systems
Project

Control Architecture for Future Power Systems
Project: PhD

V2G Siemens Feasibility Study (Preproject) : Vehicle to Grid
Project

Coordinated frequency control of wind turbines in power systems with high wind power penetration
Project: PhD

PowerLabDK : An Experimental Research Platform for Electric Power and Energy
Project

Models for Nordic Wind Energy
Project

EcoGrid DK: 50% wind power in the Danish Electric Power System
Project
Development of PMU-based early Warning Detection System for the Electric Power System  
Project: PhD

Future Network and Information architecture in electric power systems with distributed generation  
Project: PhD

Agent Based Control of Electric Power Systems with Distributed Energy Resources  
Project: PhD

Coherent Energy and Environmental System Analysis  
Project

System Integration of distributed energy resources - ICT, ancillary services, and markets  
Project: PhD

Advanced use of phasor measurement units in the Danish electric power system  
Project

Electricity Demand As Frequency Controlled Reserve  
Project

Power System Operation and Control for Integration of Large Scale of Wind Energy  
Project: PhD

Kritiske spændingsfordelinger i store vindmøllers tørtransformatorer under transiente påvirkninger  
Project: PhD

Activities:

Activity: Research › Journal editor

Power and Energy Research – a Danish Perspective  
Activity: Talks and presentations › Conference presentations

The Future Sustainable Energy System: Synergy between industry, researchers and students as a key to an efficient energy system transformation  
Activity: Talks and presentations › Conference presentations

The Future Sustainable Energy System: Synergy between industry, researchers and students as a key to an efficient energy system transformation  
Activity: Talks and presentations › Conference presentations

PowerLabDK Grand Opening: Opening remarks  
Activity: Talks and presentations › Conference presentations

Fremtidens Energisystem  
Activity: Talks and presentations › Conference presentations

Center for Electric Power and Energy (CEE)  
Activity: Talks and presentations › Conference presentations
Fremtidens fleksible elforbruger
Activity: Talks and presentations › Conference presentations

The Role of Smart Grid in Systems Integration
Activity: Talks and presentations › Conference presentations

Research in Electric Power Systems and Storage
Activity: Talks and presentations › Conference presentations

EcoGrid 2.0 Panel Debate
Activity: Talks and presentations › Conference presentations

Integrated Smart Infrastructures
Activity: Talks and presentations › Conference presentations

Development and Operation of a Wind Power Based Energy System: Experiences and Research Efforts
Activity: Talks and presentations › Conference presentations

EcoGrid EU Market Concept: Large-scale Smart Grid demonstration of real time market-based integration of distributed energy resources (DER) and demand response (DR)
Activity: Talks and presentations › Conference presentations

IEEE Spectrum (Journal)
Activity: Research › Journal editor

Opfølgning på Klima- og Energiministerens Smart Grid Strategi: Forskning, udvikling og demonstration
Activity: Talks and presentations › Conference presentations

Future Integration of Wind in the Energy System: The role of state-of-art experimental facilities
Activity: Talks and presentations › Conference presentations

Smart Flexible Energy Solutions for the Future Energy System
Activity: Talks and presentations › Conference presentations

Smart Energy Networks partnerskab
Activity: Talks and presentations › Conference presentations

Decentralized vs. Centralized Electricity Generation
Activity: Talks and presentations › Conference presentations

A Smart Energy System without Fusil Fuels: Smart Grid Technologies enabling a Secure, Efficient and Sustainable Energy System
Activity: Talks and presentations › Conference presentations

Partnership Smart Energy Network; Research, Development and Demonstration (External organisation)
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

The Intelligent Energy System
Activity: Talks and presentations › Conference presentations
Bornholm Test Island
Activity: Talks and presentations › Conference presentations

Renewable Energy, Smart Grid and Japan
Activity: Talks and presentations › Conference presentations

Smart Grid Activities at Bornholm
Activity: Talks and presentations › Conference presentations

PowerLabDK - Experimental Facilities for Power and Energy
Activity: Talks and presentations › Conference presentations

World-class experimental platform for Smart Grid development
Activity: Talks and presentations › Conference presentations

The Bornholm Power System: A Full-Scale Laboratory for Smart Grid Research
Activity: Talks and presentations › Conference presentations

Power System Balancing by Distributed Energy Resources and Flexible Demand
Activity: Talks and presentations › Conference presentations

The Minister for Climate, Energy and Building Smart Grid Network (External organisation)
Activity: Membership › Membership of committees, commissions, boards, councils, associations, organisations, or similar

International Development Trends within Smart Grid
Activity: Talks and presentations › Conference presentations

Press clippings:

CLEAN REVOLUTION: Denmark is striving to become the world's first carbon-neutral nation
Press / Media

Fremtiden er sammentænkte energiløsninger
Press / Media

Jacob Østergaard: From Smart Grids to Smart Energy
Press / Media