Research outputs:

**Trailing edge sub-component testing for wind turbine blades - Part A: Comparison of concepts**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Assessment and propagation of mechanical property uncertainties in fatigue life prediction of composite laminates**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**BLATIGUE Project Report-Standard Static Tests of a 14.3 m Olsen Wing Blade**
Research output: Research - peer-review › Report – Annual report year: 2018

**Buckling and progressive failure of trailing edge subcomponent of wind turbine blade**
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

**Cloud and Data - Op i vinden og ud i rummet - med IBM Cloud**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

**Committee III.2: Fatigue and Fracture**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

**Integrated dynamic testing and analysis approach for model validation of an innovative wind turbine blade design**
Research output: Research - peer-review › Paper – Annual report year: 2018

**RELIABLADE- Improved wind turbine blade reliability by using digital twins throughout the lifecycle**
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

**Report on probabilistic analysis method for blades Work Package 7.4: Structural reliability methods. Deliverable number 74.1**
Research output: Research › Report – Annual report year: 2018

**Research sized wind turbine blade modal tests: comparison of the impact excitation with shaker excitation: Paper**
Research output: Research - peer-review › Conference article – Annual report year: 2018

**‘Testing report on blade subcomponents’ Work Package 7.1: Efficient blade structure Deliverable number 7.1.2 Part A ‘Tests on blade sub parts’**
Research output: Research › Report – Annual report year: 2018
Materials for Wind Turbine Blades: An Overview
Research output: Research - peer-review › Journal article – Annual report year: 2017

Condensation of long-term wave climates for the fatigue design of hydrodynamically sensitive offshore wind turbine support structures
Research output: Research - peer-review › Journal article – Annual report year: 2015

Initiation of trailing edge failure in full-scale wind turbine blade test
Research output: Research - peer-review › Journal article – Annual report year: 2016

Methodology for testing subcomponents; background and motivation for subcomponent testing of wind turbine rotor blades
Research output: Research - peer-review › Report – Annual report year: 2016

Non-linear ultimate strength and stability limit state analysis of a wind turbine blade
Research output: Research - peer-review › Journal article – Annual report year: 2015

Subcomponent testing of trailing edge panels in wind turbine blades
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

A Critical Evaluation of Structural Analysis Tools used for the Design of Large Composite Wind Turbine Rotor Blades under Ultimate and Cycle Loading
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Committee III.2 Fatigue and Fracture
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Comparing Fatigue Life Estimations of Composite Wind Turbine Blades using different Fatigue Analysis Tools
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Damage tolerance and structural monitoring for wind turbine blades
Research output: Research - peer-review › Journal article – Annual report year: 2015

DTU-ESA millimeter-wave VALidation STandard antenna (mm-VAST) - detailed design
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

DTU-ESA millimeter-wave validation standard antenna (mm-vast) – performance verification
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Effect of Trailing Edge Damage on Full-Scale Wind Turbine Blade Failure
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Electromechanical Drivetrain Simulation.
Research output: Research › Ph.D. thesis – Annual report year: 2015

Experimental Blade Research - phase 2
Research output: Research › Report – Annual report year: 2015

Millimeter wave VALidation STandard (mm-VAST) antenna. Final Report.
Research output: Research - peer-review › Report – Annual report year: 2015
New morphing blade section designs and structural solutions for smart blades
Research output: Research - peer-review » Report – Annual report year: 2016

Offshore Wind Turbine Foundation Design

Structural Design of the DTU-ESA MM-Wave Validation Standard Antenna
Research output: Research » peer-review » Article in proceedings – Annual report year: 2015

The DTU-ESA Millimeter-Wave Validation Standard Antenna – Manufacturing and Testing
Research output: Research » peer-review » Article in proceedings – Annual report year: 2015

The effect of delaminations on local buckling in wind turbine blades
Research output: Research » peer-review » Journal article – Annual report year: 2015

Ultimate Strength of Wind Turbine Blades under Multiaxial Loading

Very large wind turbine rotor blades require damage tolerance and damage monitoring
Research output: Research » Poster – Annual report year: 2015

Advanced topics on rotor blade full-scale structural fatigue testing and requirements
Research output: Research » Report – Annual report year: 2015

An high order Mixed Interpolation Tensorial Components (MITC) shell element approach for modeling the buckling behavior of delaminated composites
Research output: Research » peer-review » Journal article – Annual report year: 2014

A practical approach to fracture analysis at the trailing edge of wind turbine rotor blades
Research output: Research » peer-review » Journal article – Annual report year: 2013

Damage detection methods on wind turbine blade testing with wired and wireless accelerometer sensors
Research output: Research » peer-review » Article in proceedings – Annual report year: 2014

Database about blade faults
Research output: Research » Report – Annual report year: 2015

DTU-ESA millimeter-wave validation standard antenna – requirements and design
Research output: Research » peer-review » Article in proceedings – Annual report year: 2014

Effect of a Damage to Modal Parameters of a Wind Turbine Blade
Research output: Research » peer-review » Article in proceedings – Annual report year: 2015

Load calculation methods for offshore wind turbine foundations
Research output: Research » peer-review » Journal article – Annual report year: 2014

Methods for testing of geometrical down-scaled rotor blades
Research output: Research » Report – Annual report year: 2015

Quick Method for Aeroelastic and Finite Element Modelling of Wind Turbine Blades
Research output: Research » peer-review » Article in proceedings – Annual report year: 2014
Rotor blade online monitoring and fault diagnosis technology research
Research output: Research › Report – Annual report year: 2015

Statistical approach for uncertainty quantification of experimental modal model parameters
Research output: Research › peer-review › Article in proceedings – Annual report year: 2015

Strain and displacement controls by fibre bragg grating and digital image correlation
Research output: Research › peer-review › Journal article – Annual report year: 2014

Uncertainty Quantification in Experimental Structural Dynamics Identification of Composite Material Structures
Research output: Research › Book chapter – Annual report year: 2014

Updating Finite Element Model of a Wind Turbine Blade Section Using Experimental Modal Analysis Results
Research output: Research › peer-review › Journal article – Annual report year: 2014

Validated Loads Prediction Models for Offshore Wind Turbines for Enhanced Component Reliability
Research output: Research › Ph.D. thesis – Annual report year: 2015

Calibration of a finite element composite delamination model by experiments
Research output: Research › peer-review › Article in proceedings – Annual report year: 2013

Comparison of coupled and uncoupled load simulations on a jacket support structure
Research output: Research › peer-review › Conference article – Annual report year: 2013

Development of an anisotropic beam finite element for composite wind turbine blades in multibody system
Research output: Research › peer-review › Journal article – Annual report year: 2013

Electromechanical Drivetrain Simulation
Research output: Research › peer-review › Article in proceedings – Annual report year: 2013

Hybrid Testing of Composite Structures with Single-Axis Control
Research output: Research › peer-review › Article in proceedings – Annual report year: 2013

Introduction to wind turbine blade design
Research output: Research › peer-review › Book chapter – Annual report year: 2013

Probabilistic methods for wind turbine blades
Research output: Research › peer-review › Report – Annual report year: 2013

Recommendations for future sub component tests: EUDP: Experimental Blade Research – Phase 2 (EBR2). Milestone 6
Research output: Research › Report – Annual report year: 2013

Reliability assessment of fatigue critical welded details in wind turbine jacket support structures
Research output: Research › peer-review › Article in proceedings – Annual report year: 2013

Results of the benchmark for blade structural models, part A
Research output: Research › peer-review › Report – Annual report year: 2013

Rotor blade full-scale fatigue testing technology and research
Research output: Research › Report – Annual report year: 2013
Static strain and deformation controlled testing of composite beams
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

Uncertainty modelling and code calibration for composite materials
Research output: Research - peer-review › Journal article – Annual report year: 2013

Anisotropic beam model for analysis and design of passive controlled wind turbine blades
Research output: Research › Report – Annual report year: 2012

Committee III.1 Ultimate Strength
Research output: Research › Article in proceedings – Annual report year: 2012

Design and test of box girder for a large wind turbine blade
Research output: Research › Report – Annual report year: 2013

Experimental Determination and Numerical Modelling of Process Induced Strains and Residual Stresses in Thick Glass/Epoxy Laminate
Research output: Research - peer-review › Article in proceedings – Annual report year: 2012

A 1d Coupled Curing and Visco-Mechanical Void Growth Model of Thick Thermosetting Composite Laminates
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011

Anisotropic beam element for modeling of the wind turbine blades
Research output: Research › Poster – Annual report year: 2011

Comparison of two finite element methods with experiments of delaminated composite panels
Research output: Research › Article in proceedings – Annual report year: 2011

Compressive strength of thick composite panels
Research output: Research - peer-review › Conference article – Annual report year: 2011

Damage Detection in Wind Turbine Blade Panels Using Three Different SHM Techniques
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Defect distribution and reliability assessment of wind turbine blades
Research output: Research - peer-review › Journal article – Annual report year: 2010

Developing Anisotropic Beam Element for Design of Composite Wind Turbine Blades
Research output: Research › Article in proceedings – Annual report year: 2011

Dynamic investigation of twist-bend coupling in a wind turbine blade
Research output: Research - peer-review › Journal article – Annual report year: 2011

Experimental Verification of the Implementation of Bend-Twist Coupling in a Wind Turbine Blade
Research output: Research › Article in proceedings – Annual report year: 2011

Finite elements modeling of delaminations in composite laminates
Research output: Research - peer-review › Article in proceedings – Annual report year: 2011
Full Scale Test SSP 34m blade, Combined load. Data report
Research output: Research › Report – Annual report year: 2011

Investigating the impact of non-linear geometrical effects on wind turbine blades—Part 1: Current status of design and test methods and future challenges in design optimization
Research output: Research › peer-review › Journal article – Annual report year: 2010

On innovative concepts of wind turbine blade design
Research output: Research › peer-review › Article in proceedings – Annual report year: 2011

Optimal Design of Laminated Composite Beams
Research output: Research › Ph.D. thesis – Annual report year: 2011

Parametric study of composite wind turbine blades
Research output: Research › peer-review › Conference article – Annual report year: 2011

Reliability-based Calibration of Partial Safety Factors for Wind Turbine Blades
Research output: Research › peer-review › Article in proceedings – Annual report year: 2011

Wind turbine blade testing under combined loading
Research output: Research › peer-review › Conference article – Annual report year: 2011

Applying static and dynamic test responses for defect prediction in wind turbine blades using a probabilistic approach
Research output: Research › peer-review › Article in proceedings – Annual report year: 2010

Blade materials, testing methods and structural design
Research output: Research › peer-review › Book chapter – Annual report year: 2010

Effect of Strain Rate on Sandwich Web Failure in the Load Carrying Girder of a Wind Turbine Blade
Research output: Research › peer-review › Article in proceedings – Annual report year: 2010

Full Scale Test of SSP 34m blade, edgewise loading LTT: Data Report 1
Research output: Research › Report – Annual report year: 2010

Full Scale Test SSP 34m blade, edgewise loading LTT. Extreme load and PoC_InvE Data report
Research output: Research › Report – Annual report year: 2010

Improved design for large wind turbine blades of fibre composites (Phase 4) - Summary report
Research output: Research › Report – Annual report year: 2010

Investigation of Structural Behavior due to Bend-Twist Couplings in Wind Turbine Blades
Research output: Research › Article in proceedings – Annual report year: 2010

On Innovative Concepts of Future Wind Turbine Blade Design
Research output: Research › peer-review › Article in proceedings – Annual report year: 2010

Optimization of Trailing Edge Sandwich Panels for a Wind Turbine Blade
Research output: Research › peer-review › Article in proceedings – Annual report year: 2010

Structural Behaviour Due to Bend-Twist Couplings In Wind Turbine Blades
Research output: Research › peer-review › Article in proceedings – Annual report year: 2010
Upscaling of Sandwich Panels for 120 m Wind Turbine Blades
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

A Hierarchical FEM approach for Simulation of Geometrical and Material induced Instability of Composite Structures
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Committee III.1Ultimate strength
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Comparison of the three different approaches for damage detection in the part of the composite wind turbine blade
Research output: Research › Article in proceedings – Annual report year: 2009

Distribution of defects in wind turbine blades and reliability assessment of blades containing defects
Research output: Research › Article in proceedings – Annual report year: 2009

Improved design for large wind turbine blades of fibre composites (Phase 3): Summary report
Research output: Research › Report – Annual report year: 2009

Investigation of structural behaviour due to bend-twist couplings in wind turbine blades
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Reducing Cross-Sectional Deformations in a Wind Turbine Blade
Research output: Research › Article in proceedings – Annual report year: 2009

Structural Design of Large Future Wind Turbine Blades under Combined Loading
Research output: Research › Conference abstract in proceedings – Annual report year: 2009

Ultimate strength
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Ultimate Strength of Wind Turbine Blades
Research output: Research › Conference abstract in proceedings – Annual report year: 2009

Vibration-Based Damage Detection in Multilayer Composite Material
Research output: Research › Article in proceedings – Annual report year: 2009

Buckling Strength of Thick Composite Panels in Wind Turbine Blades: Part I: Effect of Geometrical Imperfections
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2008

Buckling Strength of Thick Composite Panels in Wind Turbine Blades: Part II: Effect of Delaminations
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2008

Digital image correlation based failure examination of sandwich structures for wind turbine blades
Research output: Research › Article in proceedings – Annual report year: 2008

Effect of sandwich core properties on ultimate strength of a wind turbine blade
Research output: Research › Article in proceedings – Annual report year: 2008

Full Scale Test of a SSP 34m box girder 1. Data report
Research output: Research › Report – Annual report year: 2008
Full Scale Test of a SSP 34m boxgirder 2: Data report
Research output: Research › Report – Annual report year: 2008

On the Effect of Curvature in Debonded Sandwich Panels Subjected to Compressive Loading
Research output: Research › peer-review › Article in proceedings – Annual report year: 2008

Application and Analysis of Sandwich Elements in the Primary Structure of Large Wind Turbine Blades
Research output: Research › peer-review › Journal article – Annual report year: 2007

Nanoteknologiske muligheder
Research output: Research › Paper – Annual report year: 2007

Torsional Performance of Wind Turbine Blades: Part I: Experimental Investigation
Research output: Research › peer-review › Article in proceedings – Annual report year: 2007

Torsional performance of wind turbine blades - Part 1: Experimental investigation
Research output: Research › Conference abstract in proceedings – Annual report year: 2007

Torsional performance of wind turbine blades - Part 2: Numerical validation
Research output: Research › Conference abstract in proceedings – Annual report year: 2007

Improved design basis for large wind turbine blades
Research output: Research › Conference abstract for conference – Annual report year: 2006

Modeling failure in cross-section of wind turbine blade
Research output: Research › Article in proceedings – Annual report year: 2006

Static testing of cross-section of wind turbine blade (poster)
Research output: Research › Conference abstract in proceedings – Annual report year: 2006

Strukturel design af vindmøllelevninger
Research output: Research › Conference abstract for conference – Annual report year: 2006

Torsional properties of large wind turbine blades
Research output: Research › peer-review › Book chapter – Annual report year: 2006

Application of load carrying sandwich elements in large wind turbine blades
Research output: Research › Article in proceedings – Annual report year: 2005

Finite element analysis of the cross-section of wind turbine blades; a comparison between shell and 2D-solid models
Research output: Research › peer-review › Journal article – Annual report year: 2005

Perspektiver med udnyttelse af nanoteknologi
Research output: Research › Conference abstract for conference – Annual report year: 2004

Fatigue loading
Research output: Research › Article in proceedings – Annual report year: 2003

Future Challenges for the Structural Design of Marine High Speed Vessels
Research output: Research › Article in proceedings – Annual report year: 1998
Hydrodynamic Behavior, Comparison and Load Application Concerning a Transatlantic High-speed Container Vessel
Research output: Research › Article in proceedings – Annual report year: 1997

State-of-the-Art Report on Computer Systems for Design
Research output: Research › peer-review › Article in proceedings – Annual report year: 1997

Capacity and Lifetime of Foam Core Sandwich Structures
Research output: Research › Ph.D. thesis – Annual report year: 1996

Projects:

Structural Damage Prediction of Full-Scale Wind Turbine Blades Under Fatigue Loading
Project: PhD

Advanced methods for blade MOonitoring UNder full-scale Testing (AMOUNT)
Project: PhD

Verification of Structural Properties for Bend-Twist Coupled Wind Turbine Blades
Project: PhD

Villum Center for Advanced Structural and Material Testing
Project: Research

Multi-axial fatigue damage laws for composite materials at the macro-scale
Project: PhD

Fatigue behaviour of polymer composite materials at the sub-structural and structural scale
Project: PhD

Strukturel modellering af vindmølleblade med passiv kontrol
Project: PhD

Kapacitet og levetid for højtbelastede maritime FRP-sandwich konstruktioner
Project: PhD

Fatigue strength of composite wind turbine blade structures
Project: PhD

Offshore Wind Turbine Foundation Design
Project: PhD

Ultimativ styrke af Vestas' vingeboksdesign
Project: PhD

Optimal design of adaptive wind turbine blades
Project: PhD

Validated loads prediction models for offshore wind turbines for enhanced component reliability
Project: PhD
Electromechanical Drivetrain Simulation
Project: PhD

Optimal Design of Composite Structures under Manufacturing Constraints
Project: PhD

Hybrid Testing of Wind Turbine Blades
Project: PhD

Optimal Design of Smart Composite Structures
Project: PhD

Ultimate strength of wind turbine blade structures under multi axial loading
Project: PhD

Modeling the manufacturing process of wind turbine blades
Project: PhD

Damage Tolerance of Curved Sandwich Structures in Wind Turbine Blades
Project: PhD

Danish Centre for Composites Structures and Materials for Wind Turbines
Project: Research

Marine Structures
Project: Research

Dynamically Loaded Sandwich Structures
Project: Research

Activities:

An Advanced Blade Modelling Approach
Activity: Talks and presentations › Conference presentations