THURSDAY June 2

	Turbine Technology #3: Boundary Layer Flows and Flow Control II (Chair: Beatriz Mendez Lopez)	Wind and Wind Farms #3: Wakes and Blockage I (Chair: Dries Allaerts)	Artificial intelligence, Control and Monitoring #4: Drive-Trains (Chair: Donatella Zappalá)	Measurement and Testing #3: Wake Measurements (Chair: Michael Hölling)
9:00 - 10:30	Leading Edge Microspoilers for Load Dumping in Wind Turbine Rotors	Further calibration and validation of FLORIS with wind tunnel data	Estimation of Damage Equivalent Loads of Drivetrain of Wind Turbines using Machine Learning	Effect of turbulence on the performance of a pair of vertical-axis wind turbines
	Test of an active flap system on a 4.3 MW wind turbine	A numerical investigation of a wind turbine wake in non-neutral atmospheric conditions	Modelling of wind turbine gear stages for Digital Twin and real-time virtual sensing using bond graphs	Wake Rotation Impacts on Wake Decay
	Investigation of a delta wing vortex generator	Blockage effects in a single row of wind turbines	Wind turbine generator prognostics using field SCADA data	Tailoring wind turbine wake models to incoming free-stream turbulence
	Numerical Assessment of a BAY-Type Model for different Vortex Generator Shapes Applied on a Wind Turbine Airfoil	Large-scale benchmarking of wake models for offshore wind farms	The detection of generator bearing failures on wind turbines using machine learning based anomaly detection	A comprehensive procedure to process scanning lidar data for engineering wake model validation
10:30 - 11:00	Break			
	Turbine Technology #4: Rotor Design and Aeroelasticity I (Chair: D. Todd Griffith)	Wind and Wind Farms #4: Wakes and Blockage II (Chair: Christiane Montavon)	Artificial intelligence, Control and Monitoring #5: Flow and Turbine Control (Chair: Mario A. Rotea)	Floating Wind #2: Dynamics and Wakes of FOWTS II (Chair: Axelle Viré)
11:00 - 12:30	Impact of rotor size on aeroelastic uncertainty with lidar-constrained turbulence	Effects of self-induced gravity waves on finite wind-farm operations using a large-eddy simulation framework	Model-free control of the dynamic lift of a wind turbine blade section: experimental results	Using The Helix Mixing Approach On Floating Offshore Wind Turbines
	Comparison of methods for estimating short-term damping of idling wind turbine modes from measurements	Impact of Turbulent Time Scales on Wake Recovery and Operation	Effect of wind turbine size on load reduction with active flow control	Experimental analysis of the wake meandering of a floating wind turbine under imposed surge motion
	Aeroelastic model validation of an Active Trailing Edge Flap System tested on a 4.3 MW wind turbine	Extension and validation of an operational dynamic wake model to yawed configurations	State observer for the deformation state of wind turbine blades based on inertial measurements	A parametric study of the mooring system design parameters to reduce wake losses in a floating wind farm
	Field tests of a highly flexible downwind ultralight rotor to mimic a 13-MW turbine rotor	Wind farm response to mesoscale-driven coastal low level jets: a multiscale large eddy simulation study	Individual pitch control by convex economic model predictive control for wind turbine side-side tower load alleviation	Dynamics of two floating wind turbines with shared anchor and mooring lines
12:30 - 13:30	Lunch			
	Turbine Technology #5: Rotor Design and Aeroelasticity II (Chair: Martin O.L. Hansen)	Wind and Wind Farms #5: Control and Forecasting (Chair: Richard Stevens)	Smaller Wind Turbines (Chair: David Wood)	System Design and Multi-Fidelity/Multi-Disciplinary Modelling #2: Plant (Chair: Alessandro Croce)
13:30 - 15:00	Active Rotor Coning for a 25 MW Downwind Offshore Wind Turbine	Wind turbine LIDAR-assisted control: Power improvement, wind coherence and loads reduction	Aeroelastic Modelling of Tail Fins for Small Wind Turbines	Surrogate model for fast simulation of turbine loads in wind farms
	Aeroelastic model validation with 8 MW field measurements: Influence of constrained turbulence with focus on power performance	Hybrid use of an observer-based minute-scale power forecast and persistence	Real-World Development Challenges of the Clarkson University 3 Meter Ducted Wind Turbine	Axial induction control design for a field test at Lillgrund wind farm
	Extreme wind speed ramp events: A measurement-based approach for improving the modelling of ultimate loads for wind turbine design	LIDAR based multivariable H∞ feedforward control for load reduction in wind turbines	Challenges and Possible Solutions in Aeroelastic Modeling for the Distributed Wind Industry	Wind Farm Layout and unconstrained Hub Height Optimization using Genetic Algorithms applied to Different Power Densities
	Comparison of Blade Optimisation Strategies for the IEA 15 MW Reference Turbine	Analysis of the effects of scanning trajectory parameters on minute-scale lidar forecasting	Vibration damping of a Vertical Axis Wind Turbine in operating conditions	Farm wide sensitivity assessments of resonant frequencies of integrated offshore wind turbine finite element models
15:00 - 16:30	Poster Session #2			
	3D Printed Rotor Blades for a Research Wind Turbine: Aerodynamic and structural design and testing	Data-Driven State Estimation toward Blade Individual Load-Reduction of Wind Turbines	Impact of wind turbine operation conditions on infrasonic and low frequency sound induced by on-shore wind turbines	Reduction of gearbox loads of a DFIG wind turbine during grid faults with optimized converter configurations
	A comparison of wind turbine blade parametrization schemes for planform design optimization	Design Guidelines for Deployable Wind Turbines for Defense and Disaster Response Missions	Influence of soil properties on the shift in natural frequencies of a monopile-supported 5MW offshore wind turbine under scour	Repair of Wind Turbine Blades: Costs and Quality
	A data-driven approach for fault diagnosis of drivetrain system in a spar-type floating wind turbine based on the multi-point acceleration measurements	Design of gain-scheduling cascade control for a motion compensated gripper frame	Large Eddy Simulation of HAWT and VAWT performances in the vicinity of a building	Results of fatigue measurement campaign on XL monopiles and early predictive models
	A flexible, multi-fidelity Levelised Cost of Energy model for Floating Offshore Wind Turbines multidisciplinary design, analysis and optimisation approaches	Detection of Jacket Offshore Wind Turbine Structural Damage using an 1D-Convolutional Neural Network with a Support Vector Machine Layer	Manufacturing, Testing and Recycling of a small recyclable wind turbine blade	SCADA Data-Driven Wind Turbine Main Bearing Fault Prognosis Based on Principal Component Analysis
	A physics-, SCADA-based remaining useful life calculation approach for wind turbine drivetrains	Development of a Vulnerability Map of Wind Turbine Power Converters	Mechanical sensitivity analysis of strain gauge configurations in the main shaft of wind turbines	Shell buckling simulations of suction buckets with stochastic and deterministic imperfection forms
	A Resource-Efficient Design for a Flexible Hydraulic-Pneumatic Flywheel in Wind Turbine Blades	Development of an Open-Source Segmented Blade Design Tool	Model predictive control of wind turbine with aero-elastically tailored blades	Simplified dynamic inflow for control engineering models
	A simple model to predict the energy loss due to leading edge roughness	Development of engineering cost models for integrated design optimization of onshore and offshore wind farms	Modelling of turbine power and local wind conditions in wind farm using an autoencoder neural network	Simulating tip effects in vertical-axis wind turbines with the actuator line method
	A spectral model generalising the surface perturbations from leading edge erosion and its application in CFD	Dynamic Investigations between Two- and Three-bladed Wind Turbines with Various Yaw, Tilt and Cone Angles	Modified Constitutive Relation Error for Multi-Physics Wind Turbine Calibration	Simulation based prediction of ring creep on a planetary bearing of a 1MW wind turbine gearbox
	A strongly coupled Eulerian Lagrangian method applied in unsteady 3D external flows around Wind Turbine rotors	Economic nonlinear model predictive control of fatigue for a hybrid wind-battery generation system	Multidisciplinary aeroelastic optimization of a 10MW-scale wind turbine rotor targeting to reduced LCoE	Stability analysis of vortex-induced vibrations on wind turbines
	A surrogate model of offshore wind farm support structures for wind farm design and financial valuation	Effect of Blade Contamination on Power Production of Wind Turbines	Multi-Physical Simulation Toolchain for the Prediction of Acoustic Emissions of Direct Drive Wind Turbines	Stall flutter instabilities on the IEA-15 reference wind turbine in idling conditions: code-to-code comparisons and physical analyses
	Accurate Modeling of Material Nonlinearities in a Wind Turbine Spar Cap	Effect of tip speed ratio on the aerodynamic noise of a small wind turbine: An optimization study	Multi-scale Navier-Stokes analysis of geometrically resolved erosion of wind turbine blade leading edges	Study of a passive pitching rotor using blade element momentum theory coupled to a rigid-body model
	Aerodynamic Devices to Reduce/Suppress Vortex Induced Vibrations on a Wind Turbine Tower: A Review	Employing Bayesian Quadrature to Improve Fitting of Surrogate Models to Wind Turbine Loads	Numerical Study using RANS model to Predict Loading of a Wind Turbine Blade with a Trailing Edge Flap	Surrogate models for predicting stall-induced vibrations on wind turbine blades
	Along-the-path exponential integration for Floquet stability analysis of wind turbines	Engineering a Reduction of the Levelized Cost of Energy of Distributed Wind Turbines via Rotor and Control Enhancements	On LiDAR-assisted wind turbine retrofit control and fatigue load reductions	The effect of damage position on Operational Modal Analysis of wind turbine blades for SHM
	Analytical determination of the influence of geometric and material design parameters on the stress and strain fields in non-prismatic components of wind turbines	Experimental Analysis of Planet Carrier Bearing Loads under Torque and Bending Moment in a Four-Point-Suspension Drive Train	On the combined use of Vortex Generators and Gurney flaps for turbine airfoils	Towards the development of an advanced wind turbine rotor design tool integrating full CFD and FEM
	Assessing the economical impact of innovations for offshore wind farms through a holistic modelling approach	Experimental evaluation of the mesh load factor (Ky) of a 6MW wind turbine gearbox	On the ill-conditioning of the combined wind speed estimator and tip-speed ratio tracking control scheme	Transfer Learning of Model-Based Neural Network for Transfer Function Inversion and Load Monitoring of Wind Turbines
	Assessment of a heterogeneous computing CFD code in wind farm simulations	Fatigue damage calculation of offshore wind turbines' long-term data considering the low-frequency fatigue dynamics	Operations expenditure modelling of the X-Rotor offshore wind turbine concept	Uncertainty Quantification of Wind Turbine Airfoil Aerodynamics with Geometric Uncertainty
	Automatic detection and correction of aerodynamic and inertial rotor imbalances in wind turbine rotors	Finite Element Model to Predict the Impact of Wrinkles on Wind Turbine Blades	Performance assessment of wake mitigation strategies	Updates on the OpenFAST Lidar Simulator
	Case study on the benefits and risks of green hydrogen production co-location at offshore wind farms	Ground effect for ducted wind turbines: A computational study	Potential of damage accumulation during segmented rotor blade fatigue tests	Using Small Wind Turbine Technology to Design an Anti-Frost Fan
	Characterization of a Fast Response Probe for Inflow Turbulence Measurements on Wind Turbine Blades	How does the quantity, resolution, and scaling of turbulence boxes affect aeroelastic simulation convergence?	Potential of Fibre Metal Laminates in root joints of wind energy turbine rotor blades	Wind turbine gearbox fault prognosis using high-frequency SCADA data
	Comparing wind turbine aeroelastic response predictions for turbines with increasingly flexible blades	Identification of torsional frequencies of a large rotor blade based on measurement and simulation data	Propagation of wind turbine noise: measurements and model evaluation	Wind turbine load estimation using machine learning and transfer learning
	Comparison of a mid-fidelity free vortex wake method to a high-fidelity actuator line model large eddy simulation for wind turbine wake simulations	Identifying evolving leading edge erosion by tracking clusters of lift coefficients	Providing insight into what can be expected from Offshore Wind Farm Layout Optimisation	Wind turbine main bearing failure prediction using a hybrid neural network
	Comparison of Different Fidelity Aerodynamic Solvers on the IEA 10 MW Turbine Including Novel Tip Extension Geometries	Impact of calibrated soil-monopile-interaction model on resonance frequencies	Rapid approach for structural design of the tower and monopile for a series of 25 MW offshore turbines	Wind Turbine Power Curve Modelling using Gaussian Mixture Copula, ANN Regressive and BANN
	Comparison of dynamic stall on an airfoil undergoing sinusoidal and VAWT-shaped pitch motions	Impact of turbulent inflow and orography on the low-frequency noise sources of a wind turbine	Reconstructing the bending moments time history of wind turbine tower from acceleration measurements using Gaussian processes	Wind Turbine Rotor aerodynamic imbalance detection using CNN
	Continuous grid frequency support with variable synthetic inertia and feedforward pitch angle adjustment			
16:30 - 18:15	Future Generation of Wind Energy Professionals			
	Chaired by Sarah Barber and Jenni Rinker			
	Chaired by David Wood and Gerard Schepers			