

## Wake Conference 2015



#### **TUESDAY 9 JUNE**

The program is subject to change.

#### 08.30 - 09.30 REGISTRATION AND COFFEE

#### 09.30 - 10.00 OPENING SESSION

Associate Professor **Stefan Ivanell**. Uppsala University Professor **Jens N. Sorensen**. Technical University of Denmark

	Title	Submitting Author		
10.00 - 10.20 PRESENTATION	Predicting wind farm wake interaction with RANS. an investigation of the Coriolis force	van der Laan, Paul		
10.20 - 10.40 PRESENTATION	The effect of blockage on power production for laterally aligned wind turbines	Meyer Forsting, Alexander Raul		
10.40 - 11.00 PRESENTATION	Comparison of actuator disc and Joukowsky rotor flows, to explore the need fora tip correction	Van Kuik, Gijs		
11.00 - 11.20 PRESENTATION	A wake detector for wind farm control	Bottasso, Carlo L.		
11.20 - 11.40 PRESENTATION	Wake downstream of the Lillgrund wind farm - A Comparison between LES using the actuator disc method and a Wind farm Parametrization in WRF	Eriksson, Ola		
11.40 - 12.00 PRESENTATION	Using the coupled wake boundary layer model to evaluate the effect of turbulence intensity on wind-farm performance	Stevens, Richard		
	12.00 - 13.30 LUNCH			
13.30 - 13.50 PRESENTATION	Evaluation of the Actuator Line Model with coarse resolutions	Draper, Martín		
13.50 - 14.10 PRESENTATION	Comparing satellite SAR and wind farm wake models	Hasager, Charlotte		
14.10 - 14.30 PRESENTATION	A wind-tunnel investigation of wind-turbine wakes in yawed conditions	Porté-Agel, Fernando		
14.30 - 14.50 PRESENTATION	Instability of wind turbine wakes immersed in the atmospheric boundary layer	lungo, Giacomo Valerio		
14.50 - 15.10 PRESENTATION	Wake meandering under non-neutral atmospheric stability conditions – theory and facts	Larsen, Gunner		
15.10 - 15.30 COFFEE BREAK				
15.30 - 15.50 PRESENTATION	Local blockage effect for wind turbines	Nishino, Takafumi		
15.50 - 16.10 PRESENTATION	LES and RANS simulation of on-shore Bessaker wind farm. analysing terrain and wake effects on wind farm performance	Tabib, Mandar		
16.10 - 16.30 PRESENTATION	Wind-tunnel study of the wake behind a vertical axis wind turbine in a boundary layer flow using stereoscopic particle image velocimetry	Rolin, Vincent		
16.30 - 16.50 PRESENTATION	Data-driven Reduced Order Model for prediction of wind turbine wakes	lungo, Giacomo Valerio		
16.50 - 17.10 PRESENTATION	Coupling of a free wake vortex ring near-wake model with the Jensen and Larsen far-wake deficit models	van Heemst, Johannes		
17.10 - 17.30 PRESENTATION	The role of atmospheric stability/turbulence on wakes at the Egmond aan Zee Offshore wind	Barthelmie, Rebecca		



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### **WEDNESDAY 10 JUNE**

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	Title	Submitting Author			
0.00 0.20	Large Eddy Simulation of wind turbine wakes. detailed				
9.00 - 9.20	comparisons of two codes focusing on effects of numerics and				
PRESENTATION	subgrid modeling	Martinez, Luis			
9.20 - 9.40	Predicting wake meandering in real-time through instantaneous				
PRESENTATION	measurements of wind turbine load fluctuations	Aubrun-Sanches, Sandrine			
9.40 - 10.00	Offshore wind farm flow measured by complementary remote				
PRESENTATION	sensing techniques. radar satellite TerraSAR-X and lidar				
TRESENTATION	windscanners	Schneemann, Jörge			
	10.00 - 10.20 COFFEE BREAK				
10.20 - 10.40	Effects of incoming wind condition and wind turbine				
PRESENTATION	aerodynamics on the hub vortex instability	Iungo, Giacomo Valerio			
10.40 - 11.00					
PRESENTATION	Wind turbine wake detection with a single Doppler wind lidar	Wang, John (Hui)			
11.00 - 11.20					
PRESENTATION	A spectral model of stratified surface-layer turbulence	Segalini, Antonio			
11.20 - 11.40	Quantifying variability of Large Eddy Simulations of very large				
PRESENTATION	wind farms.	Andersen, Søren			
11.40 - 12.00	Comparison between experiments and Large-Eddy Simulations of				
PRESENTATION	tip spiral structure and geometry	Ivanell, Stefan			
12.00 - 13.30 LUNCH					
13.30 - 13.50		Ol. In Wales			
PRESENTATION	Wake effect on a uniform flow behind wind-turbine model	Okulov, Valery			
13.50 - 14.10	Engineering models for merging wakes in wind farm optimization	Name to Company			
PRESENTATION	applications	Machefaux, Ewan			
14.10 - 14.30		lunga Ciacama Valaria			
PRESENTATION	Data-driven RANS for simulations of large wind farms	Iungo, Giacomo Valerio			
14.30 - 14.50	Coalossing Wind Turking Wales	Moriarty Batrick			
PRESENTATION 14.50 - 15.10	Coalescing Wind Turbine Wakes	Moriarty, Patrick			
PRESENTATION	Characterizing Wake Turbulence with Staring Lidar Measurements	Bastine, David			
15.10 - 15.30	Study of wake meandering by means of fixed point lidar	Bustine, Buvia			
PRESENTATION	measurements. Spectral analysis of line-of-sight wind component	Trabucchi, Davide			
T KLSEN THI TON	15.30 – 16.00 COFFEE BREAK	Trabacciii, Baviac			
16.00 - 16.20	How Many Model Evaluations Are Required To Predict The AEP Of				
PRESENTATION	A Wind Power Plant?	Murcia, Juan Pablo			
16.20 - 16.40					
PRESENTATION	A new analytical model for wind farm control	Porté-Agel, Fernando			
16.40 - 17.00					
PRESENTATION	The impact of wake models on wind farm layout optimization	Schmidt, Jonas			
17.00 - 17.20					
PRESENTATION	Turbulent large-scale structure effects on wake meandering	Masson, Christian			
17.20 - 17.40	Large-eddy simulations of wind farm production and long distance				
PRESENTATION	wakes	Eriksson, Ola			



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## **Thursday 11 JUNE**

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9.00 - 9.20 PRESENTATION	Atmospheric stability assessment for the characterization of offshore wind conditions	Rodrigo, Javier Sanz		
9.20 - 9.40 PRESENTATION	Large-eddy simulation of the diurnal variation of wake flows in a finite-size wind farm	Porté-Agel, Fernando		
9.40 - 10.00 PRESENTATION	First comparison of LES of an offshore wind turbine wake with dual-Doppler lidar measurement in a German offshore wind farm	Vollmer, Lukas		
10.00 - 10.20 COFFEE BREAK				
10.20 - 10.40 PRESENTATION	Aeroelastic large eddy simulations using vortex methods. unfrozen turbulent and sheared inflow	Branlard, Emmanuel		
10.40 - 11.00 PRESENTATION	Wind Turbine Wake Interactions; Results from blind tests	Krogstad, Per- Åge		
11.00 - 11.20 PRESENTATION	Simulation of wake effects between two wind farms	Hansen, Kurt Schaldemose		
11.20 - 11.40 PRESENTATION	Numerical and Experimental Methods for wake flow analysis in complex terrain	Castellani, Francesco		

11.40 - 12.10 CLOSE UP

WakeBench meeting