

## Monday Oct 19, 2015

8:00 AM - 9:00 AM		<b>Registration</b>		<b>Room: Maple Leaf</b>	
9:00 AM - 9:30 AM		<b>Opening Remarks</b>		<b>Room: Maple Leaf</b>	
		<b>Room: Maple Leaf</b>		<b>Room: Oak</b>	
9:30 AM - 10:00 AM		<b>Coffee Break</b>			
<b>10:00 AM - 12:00 PM</b>	Start	<b>Field Measurements 1 (chair: H Hangan)</b>		<b>Rotor and Blade 1 (chair: K Visser)</b>	
	10:00 AM	<i>Invited Talk: Lidar in the wind industry: from the lunatic fringe to mainstream acceptance</i> <b>Michael Harris</b>		<i>Invited Talk: R&amp;D activities at DTU Wind Energy</i> <b>Jakob Mann</b>	
	10:45 AM	<i>Invited Talk: 3D Wind Field Measurements obtained with DTU Wind Energy's Space and Time Synchronized WindScanners</i> <b>Torben Mikkelsen</b>		Analysis of Wind Turbine Stall with PER-TUFT Statistics  T Gallant, D Johnson	
	11:30 AM	Uncertainty in Doppler Lidar Radial Velocity Variance Measurements  H Wang, R Barthelmie, P Doubrawa		Small Wind Turbine Performance Evaluation Using Field Test Data and a Coupled Aero-Electro-Mechanical Model  B Wallace, D McLaughlin, S Stewart	
	11:45 AM	Interaction Between the Atmospheric Boundary Layer and Wind Turbines: Assesment of Multiple-Lidar Scanning Strategies and Wake Measurements  G lungo, A Hamidi, M Debnath, et al		Visualization of Boundary Layer and Flow Seperation Using Thermography  F Samara, D Johnson	
				Ducted Wind Turbines: More Efficient than Open Rotors  B Helenbrook, K Visser, S Wilson	
12:00 PM - 1:30 PM		<b>Lunch (Room: Asher)</b>			
<b>1:30 PM - 3:00 PM</b>		<b>A2E 1 (chair: S Schreck)</b>		<b>Room: Maple Leaf</b>	
	1:30 PM	<i>Invited Talk: Wind Plant of the Future: DOE's A2e Initiative</i> <b>William Shaw</b>			
	2:15 PM	<i>Invited Talk: Coordination of Measurement and Modeling for Validation of Wind Farm Simulations</i> <b>Jonathan Naughton</b>			
3:00 PM - 3:30 PM		<b>Coffee Break</b>			
<b>3:30 PM - 5:30 PM</b>		<b>A2E 2 (Chair: J Naughton)</b>		<b>Field Measurements 2 (chair: R Barthelmie)</b>	
	3:30 PM	<i>Invited Talk: Measurements Under Controlled Conditions For Wind Turbine and Plant Modeling and Validation</i> <b>Scott Schreck</b>		<i>Invited Talk: Application of Scanning LiDAR in Wind Energy Research</i>  <b>Peter Clive</b>	
	4:15 PM	<i>Invited Talk: Wake Validation Experiment Planning for the SWIFT Facility</i> <b>David Maniaci</b>		High Resolution Vertical Wind Profile Measurements A Pederson, N Angelou, T Mikkelsen	
	5:00 PM	Overview of the DOE A2E Experimental Planetary Boundary Layer Instrumentation Assessment (XPiA) J Lundquist, K Friedrich, J Lee, et al		3D Measurements and Modelling of Wake Flow around a Full-Scale vertical Axis Wind Turbine (NENUHAR) M Sjöholm, N Angelou, K Hansen, et al	
	5:15 PM	Meso to Microscale Coupling Project S Haupt, W Shaw, B Kosovic		Scanning and Nacelle-Based Wind Lidars for Measuring Wind Turbine Wakes A Cassola, M stickland, A Oldroyd	
7:00 PM - 9:00 PM		<b>Reception</b>		<b>Location: D. K.'s Grille</b>	

**Tuesday Oct 20, 2015**

8:30 AM - 9:00 AM		<b>Registration</b>	<b>Room: Maple Leaf</b>
		<b>Room: Maple Leaf</b>	<b>Room: Oak</b>
9:00 AM - 10:30 AM	Start	<b>PEIWEE Campaign (chair: S Pryor)</b>	<b>Wind Tunnel Testing 1 (chair: P Lavoie )</b>
	9:00 AM	<b>Invited Talk: An overview of the PEIWEE experiment 2015</b>  <b>Rebecca Barthelmie</b>	<b>Invited Talk: Scale Model Technology for Wind Energy: Numerical vs. Experimental Validation in Wind Tunnel</b>  <b>Alberto Zasso</b>
	9:45 AM	Measurements and Modeling of Wind Turbine Relevant Flow Parameters at an Escarpment During PEIWEE S Pryor, H Wang, P Doubrawa, et al	Experimental Study of Turbulent Swirling Wakes with Stereoscopic Particle Image Velocimetry M Holmes, J Naughton, P Nikoueeayan
	10:00 AM	Wind and Turbulent Intensity Variations at the WEICAN North Cape Site S Miller, P Taylor, S Afsharian	Large-Scale Physical Simulation of Flow Over Complex Topography R Kilpatrick, K Siddiqui, H Hangan
	10:15 AM	Shear Layer Effects of Cliff Edge: PEIWEE '15 "WindScanner" Campaign D Parvu, A Costache, J LoTufo, H Hangan	Flow-Induced Instabilities of Wind Turbine Blades Y Modarres-Sadeghi, P Pourazarm, M Lackner
10:30 AM - 11:00 AM		<b>Coffee Break</b>	
11:00- 11:45AM		<b>Room: Maple Leaf</b>	<b>chair: H Hangan</b>
		<b>Invited Talk: Business Perspective and Useable Innovation</b>  <b>David Hickey</b>	
11:45 PM - 1:15 PM		<b>Lunch (room: Asher)</b>	
1:15 PM - 2:45 PM		<b>Materials/Structural 1 (chair: R Varma)</b>	<b>Wind Tunnel Testing 2 (chair: J Mann)</b>
	1:15 PM	<b>Invited Talk: Effects of Defects on Wind Turbine Blade Reliability</b>  <b>Douglas Cairns</b>	<b>Invited Talk: New multi-scale physical simulations for Wind Energy in the WindEEE Dome</b>  <b>Horia Hangan</b>
	2:00 PM	Sensing skin for Large-Scale Surface Strain Measurements S Laflamme, A Downey	Inverse Wind Turbine Blade Design for Scaled Wake Testing A Hassanzadeh, J Naughton
	2:15 PM	Experimental Investigation of Dynamic Delamination in Curved Woven and Unidirectional Composite Laminates I Uyar, B Taşdemir, D Coker	Advanced Surface Pressure Measurement Techniques for Characterization of 3-D Wind Turbine Airfoil Stall P Nikoueeayan, J Naughton, K Disotell, et al
2:30 PM	Wind Turbine Nacelle Transfer Functions (NTFS) Calculated From Upwind Lidar and Tower Measurements C St. Martin, J Lundquist, A Clifton, et al	Pressure and Velocity Characterization of a Blunt Trailing Edge Airfoil Wake with Three-Dimensional Forcing H Clark, P Lavoie	
2:45 PM - 3:15 PM		<b>Coffee Break</b>	
3:15 PM - 4:00 PM		<b>Wind Farm Tools 1 (chair: K Siddiqui)</b>	<b>Modeling/Simulation 1 (chair: J Mann)</b>
	3:15 PM	Windtell: Wind Farm Analytics A Crough, P McKay, R Cariveau, et al	Large Eddy Simulation of Atmospheric Boundary Layer Flows Over Complex Terrain Y Han, M Stoellinger
	3:30 PM	Methodology to Quantify Efficiency of Land-Based WindFarm  K Bhaganagar, R Vega, M Sazzad	Evaluation of a New Parameterization for Surface Stresses in Marine Atmospheric Boundary Layers Accounting for Non-Equilibrium Waves B Kosović, N Patton, M Žagar, et al
	3:45 PM	Control of Static Var Compensator for Prevention of Subsynchronous Resonance in Induction-Generator Based Wind Farm Connected to Series Compensated Line D Koirala, R Varma	Effective Velocity Model Improved Actuator Line Approach for HAWT and VAWT Application A Zasso, P Schito, L Bernini
4:00 PM	Cost Effective Offshore Wind Resource Assessment and Uncertainty Reduction - A Case Study E Coutts, A Oldroyd, R Murthy, A Cassola	Wind Turbine Wake Modeling Based on New Metrics for Wake Characterization P Doubrawa, R Barthelmie, M Churchfield	
4:30 PM - 6:30 PM		<b>Tour of WindEEE</b>	

**Wednesday Oct 21, 2015**

8:30 AM - 9:00 AM		<b>Registration</b>	<b>Room: Maple Leaf</b>
		<b>Room: Juniper</b>	<b>Room: Maple Leaf</b>
<b>9:00 AM - 10:30 AM</b>	Start	<b>Modeling/Simulation 2 (chair: A Elatar)</b>	<b>Wind Farm Tools 2 (chair: S Haupt)</b>
	9:00 AM	<i>Invited Talk: Research Activities on an Operating Wind Farm</i> <b>Marianne Rodgers</b>	<i>Invited Talk: Experimental investigations of flow over terrain for wind energy</i> <b>Jakob Mann</b>
	9:45 AM	Using Large-Eddy Simulation to Estimate Spatial Coherence and Power Spectral Density of a Major Hurricane for Wind Turbine Design Applications R Worsnop, G Bryan, J Lundquist	WRF Simulations of a Pseudo Offshore Wind Farm: Validation Against Field Measurements and Evaluation of Wind Turbine Drag Parameterization P. Doubrawa, H. Wang, S. Pryor et al.
	10:00 AM	Breezy' Mysteries - Using a Combination of High-Fidelity Flow Simulation & Visualization to Extract Greater Understanding of Wind Turbine Wake Interactions S Schmitz, E Duque	Wind Turbine Wakes from Scanning Lidar R Barthelmie, H Wang, P Doubrawa, et al
	10:15 AM	The Customizable Tool for Creation of Structured Mesh Geometry of a Vertical Axis Wind Turbine Rotor M Balbekov, V Dmitriyev, B Stoevesandt, et al	Complex Terrain and Wind Farm Interactions M Welch, R Jacobson, J Naughton
10:30 AM - 11:00 AM		<b>Coffee Break</b>	
<b>11:00 AM - 12:30 PM</b>		<b>Control/Modeling (chair: H Hangan)</b>	<b>Materials/Structural 2 (chair: C Jubayer)</b>
	11:00 AM	<i>Invited Talk: Laminar mixing for energy efficiency: theory and experiment</i> <b>Hassan Peerhossaini</b>	<i>Invited Talk: Transition to Ecological and Democratic Societies using 100 % Renewable Energy Community Power</i> <b>Tanay Sidki Uyar</b>
	11:45 AM	Variable, Large Feedback Wind Turbine Control Synthesis with Limited Plant Information Y O'Brien, J O'Brien	High Intensity Wind Effects on Full-Scale PV Solar Panels D Eden, E Dragomirescu, S Mehranfar
	12:00 PM	Potential Inaccuracies in Energy Estimates from Standard Wind Turbine Power Curves A Salisbury, K Visser	Curved Beam Strength and Toughness of Thin Ply CFRP Non-Crimp Fabric Laminates M A Arca, M Papila and D Coker
	12:15 PM	Dynamic Modelling and Simulation of a Wind Turbine A Altuğ, İ Yavrucuk	The wind-structure interaction of a shallow wind turbine foundation J Kiss, T Newson, C. Miller
12:30 PM - 1:00 PM		<b>Closing Remarks: John Capone-VP Research</b> <b>Room: Maple Leaf</b>	
1:00 PM - 2:00 PM		<b>Lunch (Room: Asher)</b>	