

Monday Oct 19, 2015

8:00 AM - 9:00 AM		Registration	Room: Maple Leaf
9:00 AM - 9:30 AM		Opening Remarks	Room: Maple Leaf
		Room: Maple Leaf	Room: Oak
9:30 AM - 10:00 AM		Coffee Break	
10:00 AM - 12:00 PM	Start	Field Measurements 1 (chair: H Hangan)	Rotor and Blade 1 (chair: K Visser)
	10:00 AM	Invited Talk: Lidar in the wind industry: from the lunatic fringe to mainstream acceptance Michael Harris	Invited Talk: R&D activities at DTU Wind Energy Jakob Mann
	10:45 AM	Invited Talk: 3D Wind Field Measurements obtained with DTU Wind Energy's Space and Time Synchronized WindScanners Torben Mikkelsen	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 Iungo, A Hamidi, M Debnath, et al	Visualization of Boundary Layer and Flow Seperation Using Thermography F Samara, D Johnson
12:00 PM - 1:30 PM		Lunch (Room: Asher)	
1:30 PM - 3:00 PM		A2E 1 (chair: S Schreck)	Room: Maple Leaf
	1:30 PM	Invited Talk: Wind Plant of the Future: DOE's A2e Initiative William Shaw	
	2:15 PM	Invited Talk: Coordination of Measurement and Modeling for Validation of Wind Farm Simulations Jonathan Naughton	
3:00 PM - 3:30 PM		Coffee Break	
3:30 PM - 5:30 PM		A2E 2 (Chair: J Naughton)	Field Measurements 2 (chair: R Barthelmie)
	3:30 PM	Invited Talk: Measurements Under Controlled Conditions For Wind Turbine and Plant Modeling and Validation Scott Schreck	Invited Talk: Application of Scanning LiDAR in Wind Energy Research Peter Clive
	4:15 PM	Invited Talk: Wake Validation Experiment Planning for the SWIFT Facility David Maniaci	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		Reception	Location: D. K.'s Grille

Tuesday Oct 20, 2015

8:30 AM - 9:00 AM		Registration	Room: Maple Leaf
		Room: Maple Leaf	Room: Oak
9:00 AM - 10:30 AM	Start	PEIWEE Campaign (chair: S Pryor)	Wind Tunnel Testing 1 (chair: P Lavoie)
	9:00 AM	<i>Invited Talk: An overview of the PEIWEE experiment 2015</i> Rebecca Barthelmie	<i>Invited Talk: Scale Model Technology for Wind Energy: Numerical vs. Experimental Validation in Wind Tunnel</i> Alberto Zasso
	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 Nikoueeyan
	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		Coffee Break	
11:00- 11:45AM		Room: Maple Leaf	chair: H Hangan
		<i>Invited Talk: Business Perspective and Useable Innovation</i>	David Hickey
11:45 PM - 1:15 PM		Lunch (room: Asher)	
1:15 PM - 2:45 PM		Materials/Structural 1 (chair: R Varma)	Wind Tunnel Testing 2 (chair: J Mann)
	1:15 PM	<i>Invited Talk: Effects of Defects on Wind Turbine Blade Reliability</i> Douglas Cairns	<i>Invited Talk: New multi-scale physical simulations for Wind Energy in the WindEEE Dome</i> Horia Hangan
	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 Nikoueeyan, 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		Coffee Break	
3:15 PM - 4:00 PM		Wind Farm Tools 1 (chair: K Siddiqui)	Modeling/Simulation 1 (chair: J Mann)
	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		Tour of WindEEE	

Wednesday Oct 21, 2015

8:30 AM - 9:00 AM		Registration	Room: Maple Leaf
		Room: Juniper	Room: Maple Leaf
9:00 AM - 10:30 AM	Start	Modeling/Simulation 2 (chair: A Elatar)	Wind Farm Tools 2 (chair: S Haupt)
	9:00 AM	<i>Invited Talk: Research Activities on an Operating Wind Farm</i> Marianne Rodgers	<i>Invited Talk: Experimental investigations of flow over terrain for wind energy</i> Jakob Mann
	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		Coffee Break	
11:00 AM - 12:30 PM		Control/Modeling (chair: H Hangan)	Materials/Structural 2 (chair: C Jubayer)
	11:00 AM	<i>Invited Talk: Laminar mixing for energy efficiency: theory and experiment</i> Hassan Peerhossaini	<i>Invited Talk: Transition to Ecological and Democratic Societies using 100 % Renewable Energy Community Power</i> Tanay Sidki Uyar
	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		Closing Remarks: John Capone-VP Research Room: Maple Leaf	
1:00 PM - 2:00 PM		Lunch (Room: Asher)	