

LANL 2011 Wind Energy Engineering Workshop

Modeling of Turbine-Turbine Interactions with Experimental Validation March 2-3, 2011, Los Alamos National Laboratory, Los Alamos, NM, USA

Day 1: Wednesday, March 2nd, Los Alamos Research Park, Rooms 203A&B

8:00am Registration/Badging 8:00am Welcome and Introduction Terry Wallace, Principal Associate Director for Science, Technology & Engineering, LANL Keynote Address Invited Speaker: Mark Higgins, DOE Wind & Water Power Program "An Overview of the DOE Wind Program and Our R&D Research Priorities" 8:45am LANL Intelligent Wind Turbine Project Overview Curtt Ammerman, Applied Engineering & Technology Division, LANL Dynamically Coupled Turbine-Wind Simulations Using HPC Rod Linn, Earth and Environmental Sciences Division, LANL Blade FE and Coupled Plant Scale Aeroelastodynamic Modeling Gretchen Ellis, Applied Engineering & Technology Division, LANL DJ Luscher, Theoretical Division, LANL Break 10:30am Multiscale Sensing and Structural Health Monitoring Kevin Farinholt, Applied Engineering & Technology Division, LANL Experimental Wind Turbine Aerodynamics Research BJ Balakumar, Physics Division, LANL Modeling Development Activities Curtt Ammerman, Applied Engineering & Technology Division, LANL 12:00pm Buffet Lunch Invited Speaker: John Dabiri, California Institute of Technology "Vertical-Axis Wind Turbines Revisited" 1:00pm Aerodynamic Modeling Overview Julie Lundquist, University of Colorado at Boulder 4:45pm Aerodynamic Validation Overview Case van Dan, University of Colorado at Boulder 8:430pm Structural Modeling Overview Mark Rumsey and Jon White, Sandia National Labs 4:15pm Overview of Tomorrow's Breakout Sessions 4:30pm Adjourn 6:30pm Group Dinner – Location: Los Alamos Hilltop House Hotel Dining Room Invited Speaker: Peter Lissaman, Da Vinci Ventures "Wind, Wings, Creativity and the Gossamer Condor"			
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Day 2: Thursday, March 3rd, Los Alamos Research Park, Rooms 203A&B

8:00am	Session Goals & Guidelines		
8:15am	Aero Modeling and Validation 1 (203A) Experiments and Simulations on Full- Scale Wind Turbines	Structural Modeling and Validation 1 (203B) Measuring and Modeling Real World Turbine Response	
10:00am	Break		
10:15am	Aero Modeling and Validation 2 (203A) Turbulence and Scale-Model Wind Turbine Research – Relevance for Siting and Fatigue Loading Problems	Structural Modeling and Validation 2 (203B) Measuring and Modeling Damage and its Influence	
12:00pm	Buffet Lunch Invited Speaker: Rebecca Barthelmie, Indiana University "Large Wind Farm Wakes"		
1:00pm	Aero Modeling and Validation 3 (203A) Path Forward for Future Experiments, Simulations, and Diagnostics	Structural Modeling and Validation 3 (203B) Path Forward for Future Experiments, Simulations, and Diagnostics	
3:00pm	Break		
3:15pm 4:30pm	Summary of Breakout Sessions Wrap Up and Future Actions		
5:00pm	Adjourn		



