

**Tuesday, July 20** Click on the items below to view available PDFs.

#### Welcome/Industry Status

- Welcome*, Daniel Laird, Sandia National Laboratories (Verbal Presentation)
- Energy and Security Systems*, Terry Michalske, Sandia National Laboratories (Verbal Presentation)
- DOE Wind and Water Program*, Jacques Beaudry-Losique, U.S. Department of Energy
- Wind Industry Status*, Daniel Laird, Sandia National Laboratories
- Trends in Turbine and Blade Technology – 2010*, Thomas Ashwill, Sandia National Laboratories

#### Turbine Manufacturers

- Blade Design Challenges - Where is the Next Achilles Heel(s)?*, Carsten Westergaard, Vestas (Not Available)
- Wind Blade Technologies Overview*, Shu Quek, General Electric
- Turbine and Blade Technology at Northern Power*, Jonathan Lynch, Northern Power Systems

#### Blade Manufacturers

- Boosting the Aerodynamic Performance of the Blade Root Region*, Frank Nielsen, LM Wind Power (Not Available)
- Blade Manufacturing Requirements & Developments*, Steve Nolet, TPI Composites
- Rotor Maintenance in the Field*, Gary Kanaby, Knight and Carver

#### Blade Testing

- Blade Testing at NREL's NWTC*, Scott Hughes, National Renewable Energy Laboratory
- Massachusetts Large Blade Testing Facility Update*, Rahul Yarala, MCEC WTTC
- Developments in Blade Fatigue Testing*, Tim Westphal, WMC
- Deepwater Floating Offshore Wind Program at UMaine: DeepCwind*, Habib Dagher, University of Maine

#### Sensors

- Sensor Systems and Applications*, Mark Rumsey, Sandia National Laboratories
- Fiber Optic Sensors and the Sensor Blade Collaboration Between Micron Optics and Sandia National Laboratories*, Alan Turner, Micron Optics

### Wednesday, July 21, Track I

#### Materials

- The SNL/MSU/DOE Fatigue Program: Recent Results*, John Mandell, Montana State University
- Advances in Wind Turbine Blade Composites*, Mala Nagarajan, Owens Corning
- Performance Evaluation and Recent Developments of Fiber Glass Laminates*, Juan Serrano, PPG Industries
- Next Generation Infusion Resin for Wind Blades - Fatigue Performance of a New High-toughness Resin*, Tim McCarthy, Materia
- Advanced Material Solutions for Blade Construction*, Jay Bhatia, BASF
- Advances in Epoxy Technology as Matrix Materials for Wind Turbine Blade Composites*, George Jacob, Dow Chemical Company
- Nanostrength Block Copolymers for Wind Energy*, Robert Barsotti, Arkema
- UD Prepregs for Load Carrying Structures in Infused Blades*, Chris Shennan, Hexcel Composites
- Webcore and Performance of General Sandwich Core Materials*, Frederick Stoll, WebCore Technologies, LLC.
- Titanium for Offshore: Properties and Applications*, William MacDonald, Timet (Not Available)

#### Inspection

- Optical Measurement Systems Applied to Wind Turbine Blades for the Detection and Characterization of Defects*, Matt Crompton, Dantec

#### Transportation

- Challenges w/Wind Blade Road Transportation and Break-down of In-situ Dynamics*, Pari Tathavadekar, Clipper

#### Manufacturing

- Manufacturing*, Daniel Laird, Sandia National Laboratories

#### Offshore Wind

- Overview of the DOE Offshore Wind Program*, Jose Zayas, Sandia National Laboratories

### Wednesday, July 21, Track II

#### Blade Research and Innovative Design

- Blade Noise Research at Sandia National Labs*, Dale Berg, Sandia National Laboratories
- A Focus on the Flow in the Inboard Part of the Blade*, Case van Dam, UC-Davis
- Multi-disciplinary Design Optimization of Wind Turbines*, Carlo Bottasso, Politecnico di Milano
- Smart Blade Update*, Jonathan White, Sandia National Laboratories
- Adaptive Trailing Edge Flap: Recent Development in Smart Blades*, Leonardo Bergami, Risø
- Innovative Blade Research: Passive Load Reduction & 100-m Blade Design*, Thomas Ashwill, Sandia National Laboratories
- Probabilistic Design of Wind Turbine Blades*, John Dalsgaard Sørensen, Aalborg University & Risø-DTU

#### Wind Turbine Design and Analysis Codes

- Integrated System Design and Analysis at Sandia*, Brian Resor, Sandia National Laboratories
- Recent Analysis Code Development at NREL*, Jason Jonkman/Gunjit Bir, National Renewable Energy Laboratory
- VABS-IDE: VABS-Enabled Integrated Design Environment (IDE) for Efficient High-Fidelity*, Phillip Richards, Georgia Tech
- Wind Turbine Blade Automated Structural Analysis and Minimum Weight Design using HyperSizer®*, James Locke, Collier Research Codes (Not Available)
- FOCUS 6: The integrated Modular Wind Turbine Design Tool*, Richard Numan, KC WMC
- Risø HAWC2: Models and Capabilities, a Quick Overview*, Leonardo Bergami, Risø

#### Offshore Wind

- Overview of the DOE Offshore Wind Program*, Jose Zayas, Sandia National Laboratories

### Thursday, July 22

#### Small Wind

- Strategies for Stabilizing the Small Wind Market*, Trudy Forsyth, National Renewable Energy Laboratory

#### Water Power

- Marine Hydrokinetic Technology Development: Synergies with Wind Power Research*, Joshua Paquette, Sandia National Laboratories (Not Available)

#### Radar

- Research Options for Wind/Radar Challenges*, Jose Zayas, Sandia National Laboratories

#### Reliability

- DOE/SNL Reliability Overview*, Daniel Laird, Sandia National Laboratories
- CREW Database*, Bridget McKenney, Sandia National Laboratories
- BRC Overview*, Daniel Laird, Sandia National Laboratories
- Blade Standards*, Derek Berry, National Renewable Energy Laboratory (Not Available)
- BRC Survey*, Alistair Ogilvie, Sandia National Laboratories
- Effects of Defects*, Doug Cairns, Montana State University
- Non-Destructive Inspection*, Dennis Roach, Sandia National Laboratories

#### Closing Remarks

- Closing Remarks*, Daniel Laird, Sandia National Laboratories (Verbal Presentation)