

## **Monday, May 12**

### ***Welcoming Remarks, Overview***

*Welcome & Introductions*, Tom Ashwill and Daniel Laird, Sandia National Laboratories (Oral presentation)

*Wind Energy Industry Overview*, Daniel Laird, Sandia National Laboratories

*Blades: Trends and Research Update*, Tom Ashwill, Sandia National Laboratories

### ***Manufacturers & Fabrication***

*Turbine Blades from Ground Level*, Gary Kanaby, Knight & Carver

*Commercial Blade Developments at TPI Composites*, Stephen Nolet, TPI

*DeWind Blade Experiences*, Stefan Sanner, DeWind

*Probabilistic Design with Focus on Blades*, Dick Veldkamp, Vestas R&D Global Research

*Blade Manufacturing at Siemens Wind Power A/S*, Christian Brixen Christensen, Siemens Wind Power A/S (NOT currently available)

### ***Small Wind***

*Overview of Small Wind Turbines*, Trudy Forsyth, National Renewable Energy Laboratory

*Small Wind Turbine Blade Manufacturing Process Developments 2008*, Michelle Corning, Novakinetics

*High-efficiency Engineered Blades for Small Turbines*, Kyle Wetzel, Wetzel Engineering

*Materials and Processes for Volume Manufacturing of Small Wind Turbine Blades*, David Calley, Southwest Windpower

### ***Blade Testing***

*Prototype Laboratory and Field Testing*, Josh Paquette, Sandia National Laboratories

*Wind Turbine Blade Testing at NREL*, Scott Hughes, National Renewable Energy Laboratory

*Commercial Blade Testing-Overview of the NREL Large Blade Test Facility Partnerships*, Jason Cotrell, National Renewable Energy Laboratory

*The Massachusetts-NREL Wind Technology Testing Center-Developments and Opportunities*, Ian Springsteel, MTC

## **Tuesday, May 13**

### ***Active Controls & Aerodynamics***

*Review of IEA Smart Structures Meeting & SNL Active Aerodynamic Flow Control Efforts*, Dale Berg, Sandia National Laboratories

*Deformable Trailing Edge Geometries and Cyclic Pitch Controller*, Thomas Buhl, Risø

*Investigation of Stability Issues for an Adaptive Trailing Edge System*, Mac Gaunaa, Risø

*Smart Rotors for Wind Turbine Blades*, Julie Teuwen, Delft

*Research on Thick Blunt Trailing Edge Wind Turbine Airfoils*, Case van Dam, UC Davis

*Aerodynamic Winglet Optimization*, Soren Hjort, Siemens Wind Power A/S

### ***Materials and Codes***

*Recent Fatigue Test Results for Blade Materials*, John Mandell, Montana State University

*Subcomponent and Materials Test Methods and Results*, Rogier Nijssen, WMC

*Durable Composite Materials for Wind Turbine Blades*, Mala Nagarajan, Owens Corning

*Influence of Fiber Glass Sizings and Resin Selection on Laminate Performance*, Jim Watson, PPG Fiberglass R&D

*Blade Design with Engineered Cores Materials*, Fred Stoll, Webcore Technologies

*FOCUS5, an Integrated Wind Turbine Design Tool*, Niels Duineveld, WMC

*NREL Structural and Aeroelastic Codes*, Jason Jonkman, National Renewable Energy Laboratory

*Vacuum Infused Thermoplastic Composites for Wind Turbine Blades*, Julie Teuwen, Delft

*Integrated Rotor Design*, Lars Fuglsang, LM Glasfiber A/S

*NuMAD, Blade Structural Analysis*, Daniel Laird, Sandia National Laboratories

## **Wednesday, May 14**

### ***Sensor Technologies & Applications***

*Low Cost Inspection for Improved Blade Reliability*, Doug Cairns, Montana State University

*Sensor Projects at Sandia National Laboratories*, Mark Rumsey, Sandia National Laboratories

*Fiber Optic Sensing*, Jason Kiddy, Aither Engineering

*Estimation of Operational Loading and Deflection with Inertial Measurements*, Jon White, Purdue

*Advanced Optical Measurement Technologies for NDE*, Matt Crompton, Dantec Dynamics

*Fibre Optic Sensing Technology and Applications in Wind Energy*, Phil Rhead, Insensys Limited

### ***Blade Reliability***

*Blade Reliability Initiative*, Paul Veers, Sandia National Laboratories

*Initial National Reliability Database (NRD) Results*, Roger Hill, Sandia National Laboratories