

**DeepWind 2013 - 10<sup>th</sup> Deep Sea Offshore Wind R&D Conference**  
**24 - 25 January 2013, Royal Garden Hotel, Kjøpmannsgata 73, Trondheim, NORWAY**

<b>Thursday 24 January</b>			
09.00	Registration & coffee		
	<b>Opening session – Frontiers of Science and Technology</b> Chairs: John Olav Tande, SINTEF/NOWITECH and Trond Kvamsdal, NTNU/NOWITECH		
09.30	Opening and welcome by chair		
09.40	<i>Innovations in offshore wind technology</i> , John Olav Tande, SINTEF/NOWITECH		
10.05	<i>Key research topics in offshore wind energy</i> , Kristin Guldbrandsen Frøysa, CMR/NORCOWE		
10.30	<i>Research at Alpha Ventus deep offshore wind farm</i> , Stefan Faulstich, Fh IWES		
11.00	<i>WindFloat deep offshore wind operational experience</i> , Pedro Valverde, EdP		
11.30	<i>HyWind deep offshore wind operational experience</i> , Finn Gunnar Nielsen, Statoil		
11.55	Closing by chair		
12.00	Lunch		
	Parallel sessions		
	<b>A1) New turbine technology</b> Chairs: Michael Muskulus, NTNU Prof Gerard van Bussel, TU Delft	<b>B1) Power system integration</b> Chairs: Prof Kjetil Uhlen, NTNU Prof Olimpo Anaya-Lara, Strathclyde Uni	<b>C1) Met-ocean conditions</b> Chairs: Prof J Reuder, Uni of Bergen Erik Berge, Kjeller Vindteknikk
13.00	Introduction by Chair	Introduction by Chair	Introduction by Chair
13.10	<i>Design Optimization of a 5 MW Floating Offshore Vertical Axis Wind Turbine</i> , Uwe Schmidt Paulsen, Technical Uni of Denmark, DTU	<i>Wind Turbine Electrical Design for an Offshore HVDC Connection</i> , Olimpo Anaya-Lara, Strathclyde Univ.	<i>Wave-induced characteristics of atmospheric turbulence flux measurements</i> , Mostafa Bakhoday Paskyabi, UiB
13.40	<i>Operational Control of a Floating Vertical Axis Wind Turbine</i> , Harald Svendsen, SINTEF Energi AS	<i>Frequency Quality in the Nordic system: Offshore Wind variability, Hydro Power Pump Storage and usage of HVDC Links</i> , Atsede Endegnanew, SINTEF Energi AS	<i>Experimental characterization of the marine atmospheric boundary layer in the Havsul area, Norway</i> , Constantinos Christakos, UiB
14.00	<i>Control for Avoiding Negative Damping on Floating Offshore Wind Turbine</i> , Prof Yuta Tamagawa, Uni. of Tokyo	<i>Coordinated control for wind turbine and VSC-HVDC transmission to enhance FRT capability</i> , A. Luque, Uni. Strathclyde	<i>Buoy based turbulence measurements for offshore wind energy applications</i> , M. Flügge, UiB
14.20	<i>Towards the fully-coupled numerical modelling of floating wind turbines</i> , Axelle Viré, Imperial College, London	<i>North Sea Offshore Modeling Schemes with VSC-HVDC Technology: Control and Dynamic Performance Assessment</i> , K. Nieradzinska, University of Strathclyde	<i>Effect of wave motion on wind lidar measurements - Comparison testing with controlled motion applied</i> , Joachim Reuder, Univ of Bergen
14.40	<i>Geometric scaling effects of bend-twist coupling in rotor blades</i> , Kevin Cox, PhD stud, NTNU	<i>Upon the improvement of the winding design of wind turbine transformers for safer performance within resonance overvoltages</i> , Amir H Soloot, PhD, NTNU	<i>Turbulence analysis of LIDAR wind measurements at a wind park in Lower Austria</i> , Valerie-Marie Kumer, UiB
15.00	Refreshments		
	<b>A2) New turbine technology</b> Chairs: Michael Muskulus Prof Gerard van Bussel, TU Delft	<b>B2) Grid connection</b> Chairs: Prof Kjetil Uhlen, NTNU Prof Olimpo Anaya-Lara, Strathclyde Uni	<b>C2) Met-ocean conditions</b> Chairs: J Reuder, Uni of Bergen Erik Berge, Kjeller Vindteknikk
15.30	Introduction by Chair	Introduction by Chair	Introduction by Chair
15.35	<i>High Power Generator for Wind Power Industry: A Review</i> , Zhaoqiang Zhang, PhD stud, NTNU	<i>Planning Tool for Clustering and Optimised Grid Connection of Offshore Wind Farms</i> , Harald G. Svendsen, SINTEF	<i>Wave driven wind simulations with CFD</i> , Siri Kalvig, University of Stavanger / StormGeo
15.55	<i>Superconducting Generator Technology for Large Offshore Wind Turbines</i> , Niklas Magnusson, SINTEF Energi AS	<i>The role of the North Sea power transmission in realising the 2020 renewable energy targets - Planning and permitting challenges</i> , Jens Jacob Kielland Haug, SINTEF Energi AS	<i>New two-way coupled atmosphere-wave model system for improved wind speed and wave height forecasts</i> , Olav Krogsæter, StormGeo / University of Bergen
16.15	<i>Laboratory Verification of the Modular Converter for a 100 kV DC Transformerless Offshore Wind Turbine Solution</i> , Sverre Gjerde, PhD stud, NTNU	<i>Technology Qualification of Offshore HVDC Technologies</i> , Tore Langeland, DNV KEMA	<i>Measurement of wind profile with a buoy mounted lidar</i> , Jan-Petter Mathisen, Fugro OCEANOR
16.35	<i>Multi-objective Optimization of a Modular Power Converter Based on Medium Frequency AC-Link for Offshore DC Wind Park</i> , Rene A. Barrera, NTNU	<i>Evaluating North Sea grid alternatives under EU's RES-E targets for 2020</i> , Ove Wolfgang, SINTEF Energi AS	<i>Numerical Simulation of Stationary Microburst Phenomena with Impinging Jet Model</i> , Tze Siang Sim, Nanyang Technological University
16.55	Closing by Chair	Closing by Chair	Closing by Chair
17.00	<b>Poster session with refreshments</b>		
19.00	Dinner		

Thursday 24 January	
17.00	<p><b>Poster Session with refreshments</b></p> <ol style="list-style-type: none"> <li>1. <i>Aeroelastic analysis software as a teaching and learning tool for young and old students of wind turbines</i>, Paul E. Thomassen, NTNU</li> <li>2. <i>Magnetically Induced Vibration Forces in a Low-Speed Permanent Magnet Wind Generator with Concentrated Windings</i>, Mostafa Valavi, PhD stud, NTNU</li> <li>3. <i>Coupled 3D Modelling of Large-Diameter Ironless PM Generator</i>, Zhaoqiang Zhang, PhD stud, NTNU</li> <li>4. <i>Stability in offshore wind farm with HVDC connection to mainland grid</i>, Jorun I Marvik, SINTEF Energi AS</li> <li>5. <i>Perturbation in the acoustic field from a large offshore wind farm in the presence of surface gravity waves</i>, Mostafa Bakhoday Paskyabi, UiB</li> <li>6. <i>Autonomous Turbulence Measurements from a Subsurface Moored Platform</i>, Mostafa Bakhoday Paskyabi, UiB</li> <li>7. <i>A Markov Weather Model for O&amp;M Simulation of Offshore Wind Parks</i>, Brede Hagen, stud, NTNU</li> <li>8. <i>Turbulence Analysis of LIDAR Wind Measurements at a Wind Park in Lower Austria</i>, Valerie-Marie Kumer, UiB</li> <li>9. <i>Investigation of droplet erosion for offshore wind turbine blade</i>, Magnus Tyrhaug, SINTEF</li> <li>10. <i>A Fuzzy FMEA Risk Assessment Approach for Offshore Wind Turbines</i>, Fateme Dinmohammadi, Islamic Azad University</li> <li>11. <i>NOWIcob – A tool for reducing the maintenance costs of offshore wind farms</i>, Iver Bakken Sperstad, SINTEF Energi AS</li> <li>12. <i>Long-term analysis of gear loads in fixed offshore wind turbines considering ultimate operational loadings</i>, Amir Rasekhi Nejad, PhD, NTNU</li> <li>13. <i>Methodology to design an economic and strategic offshore wind energy Roadmap in Portugal</i>, Laura Castro-Santos, Laboratório Nacional de Energia (LNEG)</li> <li>14. <i>Methodology to study the life cycle cost of floating offshore wind farms</i>, Laura Castros Santos, Laboratório Nacional de Energia (LNEG)</li> <li>15. <i>Two-dimensional fluid-structure interaction of airfoil</i>, Knut Nordanger, PhD stud, NTNU</li> <li>16. <i>Experimental Investigation of Wind Turbine Wakes in the Wind Tunnel</i>, Heiner Schümann, NTNU</li> <li>17. <i>Numerical Study on the Motions of the VertiWind Floating Offshore Wind Turbine</i>, Raffaello Antonutti, EDF R&amp;D</li> <li>18. <i>Coatings for protection of boat landings against corrosion and wear</i>, Astrid Bjørgum, SINTEF Materials and Chemistry</li> <li>19. <i>Analysis of spar buoy designs for offshore wind turbines</i>, C. Romanò, DIMEAS, Politecnico di Torino</li> <li>20. <i>Numerical model for Real-Time Hybrid Testing of a Floating Wind Turbine</i>, Valentin CHABAUD, PhD stud, NTNU</li> <li>21. <i>Advanced representation of tubular joints in jacket models for offshore wind turbine simulation</i>, Jan Dubois, ForWind – Leibniz University Hannover</li> <li>22. <i>Comparison of coupled and uncoupled load simulations on the fatigue loads of a jacket support structure</i>, Philipp Haselbach, DTU Wind Energy</li> <li>23. <i>Design Standard for Floating Wind Turbine Structures</i>, Anne Lene H. Haukanes, DNV</li> <li>24. <i>Nonlinear irregular wave forcing on offshore wind turbines. Effects of soil damping and wave radiation damping in misaligned wind and waves</i>, Signe Schløer, DTU</li> </ol>
19.00	Dinner

**DeepWind 2013 - 10<sup>th</sup> Deep Sea Offshore Wind R&D Seminar**  
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<b>Friday 25 January</b>			
<b>Parallel sessions</b>			
	<b>D) Operations &amp; maintenance</b> Chairs: Matthias Hofmann, SINTEF Stefan Faulstich, Fh IWES	<b>E) Installation &amp; sub-structures</b> Chairs: Hans-Gerd Busmann, Fh IWES Jørgen Krogstad, Statkraft	<b>F) Wind farm modelling</b> Chairs: Prof Trond Kvamsdal, NTNU Thomas Buhl, DTU Wind Energy
08.30	Introduction by Chair	Introduction by Chair	Introduction by Chair
08.35	<i>Development of a Combined Operational and Strategic Decision Support Model for Offshore Wind</i> , Iain Dinwoodie, PhD Stud, Univ Strathclyde	<i>Structures of offshore converter platforms - Concepts and innovative developments</i> , Joscha Brörmann, Technologiekontor Bremerhaven GmbH	<i>Wind farm optimization</i> , Prof Gunner Larsen, DTU Wind Energy
09.05	<i>Vessel fleet size and mix analysis for maintenance operations at offshore wind farms</i> , Elin E. Halvorsen-Weare, SINTEF ICT/MARINTEK	<i>Dynamic analysis of floating wind turbines during pitch actuator fault, grid loss, and shutdown</i> , Erin E. Bachynski, PhD stud, NTNU	<i>Blind test 2 - Wind and Wake Modelling</i> , Prof Lars Sætran, NTNU
09.25	<i>NOWIcob – A tool for reducing the maintenance costs of offshore wind farms</i> , Iver Bakken Sperstad, SINTEF	<i>Use of a wave energy converter as a motion suppression device for floating wind turbines</i> , Michael Borg, Cranfield University	<i>A practical approach in the CFD simulations of off-shore wind farms through the actuator disc technique</i> , Giorgio Crasto, WindSim AS
09:45	<i>WINDSENSE – a joint development project for add-on instrumentation of Wind Turbines</i> , Oddbjørn Malmo, Kongsberg Maritime AS	<i>Loads and response from steep and breaking waves. An overview of the ‘Wave loads’ project</i> , Henrik Bredmose, Associate Professor, DTU Wind Energy	<i>3D hot-wire measurements of a wind turbine wake</i> , Pål Egil Eriksen, PhD stud, NTNU
10:05	<i>Long-term analysis of gear loads in fixed offshore wind turbines considering ultimate operational loadings</i> , Amir Rasekhi Nejad, PhD stud, NTNU	<i>Effect of second-order hydrodynamics on floating offshore wind turbines</i> , Line Roald, ETH Zürich	<i>Near and far wake validation study for two turbines in line</i> , Marwan Khalil, GexCon AS
10.35	Closing by Chair	Closing by Chair	Closing by Chair
10.40	Refreshments		
	<b>Closing session – Strategic Outlook</b> Chairs: John Olav Tande, SINTEF/NOWITECH and Michael Muskulus, NTNU/NOWITECH		
11.00	Introduction by Chair		
11.05	<i>Deep offshore and new foundation concepts</i> , Arapogianni Athanasia, European Wind Energy Association		
11.35	<i>Optimal offshore grid development in the North Sea towards 2030</i> , Daniel Huertas Hernando, SINTEF Energi AS		
12.05	<i>New turbine technology</i> , Svein Kjetil Haugset, Blaaster		
12.35	Poster award and closing		
13.00	Lunch		