Wind Turbine Noise 2015

Overall Programme

Sunday 19th April	14:00 to 17:00	Registration
Monday 20th April	09:00	Registration and Refreshments
	11:00	Conference Opens - Oral Presentations
	17:00	Drinks Reception and Poster Inauguration
	19:00	Free Evening
Tuesday 21st April	08:00	Refreshments
	08:30	Oral Presentations
	16:50	Workshop and Posters
	18:15	Whisky Tasting
	19:45	Free Evening
Wednesday 22nd April	08:00	Refreshments
	08:30	Oral Presentations - Parallel Sessions
	17:30	Workshop and Posters
	19:30	Conference Dinner
Thursday 23rd April	08:00	Refreshments
	08:30	Oral Presentations
	16:00	Conference Ends

Please note that some of these times may change slightly

Poster Presentations

Group	Title	Author 1
A - Source Noise - Localisation	The DTU Wind Energy WTN Test Facility	Bradley
	Doppler analysis and processing for the localization of low frequency tonal sound sources on blades: An experimental approach	Falourd
	Observation of vibration velocity at many parts of wind turbine and relational analysis with propagated sound to surroundings	Iwase
	Sound source localization on wind turbines using a single acoustic vector sensor	Serraris
B - Source Noise - Measurement	Small Wind Turbines – Comparison of Acoustic Noise Measurements in Accordance with IEC 61400-11 Ed. 3 to BWEA Small Wind Turbine Guideline	Broneske
	A new method for determining the wind turbine noise based on the constant divergence of sound pressure level	Buzduga
	Field comparison of IEC 61400-11 Wind turbines - Part11: Acoustic noise measurement techniques: Edition 3.0 and Edition 2.1	Joswiak
C - Receiver - Sensitivity	Relationship between exposure to wind turbine noise and subjective and objective sleep disorder in southern part in Japan ……..	Morimatsu
	Wind turbines - A changed environment	Palmer
	Experimental study of relationship between amplitude modulation and detection threshold of wind turbine noise	Yoon
D – Receiver - Monitoring	Study of secondary wind shield performance in the field	Adcock
	Constraints imposed by and limitations of IEC 61672 for the measurement of wind farm sound emissions	Huson (2)
	Wind noise estimation functions for low frequency sound measurment in natural wind at different topography types	Kamiakito
	Investigation into the influence of windscreens during sound emission measurements in accordance with IEC 61400-11 ed. 3.0	Kaufmann
	Background noise assessment in Utrecht	Balkema
	Automated wind farm noise measurement systems with feature analysis	Jiggins
E - Low Frequency and Infrasound	A system for measuring wind turbine infrasound emissions	Annan
	Stationary wind turbine infrasound emissions and propagation loss measurements	Huson (1)
	Environmental Impact Assessment and Management Plan on Wind Turbine Noise in South Korea	Park
	Direct experience of low frequency noise and infrasound within a windfarm community	Swinbanks
	Measuring wind turbine coherent infrasound	Vanderkooy

Monday 20th April 2015 - Oral Presentations		
11:00	Opening	
	Sound Propagation 1	
11:05	**PLENARY** - Wind turbine noise propagation - results of numerical modelling techniques to investigate specific scenarios	Sims
11:35	Modeling of ground and atmospheric effects on wind turbine noise	Tian
11:55	Metrological validation of the DIN ISO 9613-2 propagation model concerning wind turbine noise	Engelen
12:15	Prediction of variability in wind turbine noise calculations	Cotte
12:35	Discussion	
13:00	Lunch	
	Sound Propagation 2	
14:00	Directivity noise attenuation values for large wind turbines - Research based on long term measurements	Coulon
14:20	Propagation of noise from wind farms according to the Institute of Acoustics' Good Practice Guide - a sensitivity analysis	Birchby
14:40	Low-Frequency acoustic near-field of wind-turbines	Richarz
15:00	Prediction of infrasound and low frequency noise propagation for modern wind turbines, a proposed supplement to ISO9613-2	Hansen
15:20	Discussion	
15:40	Break	
	Sound Propagation 3	
16:00	Influence of vertical temperature gradient on background noise and on long-range noise propagation from wind turbines	Bigot
16:20	Effects of built environment morphology in residential areas on resisting wind turbine noise on building façades	Qu
16:40	Discussion	
16:50	Session ends	

Tuesday 21st April 2015 - Oral Presentations		
	Health Effects and Annoyance	
08:30	**PLENARY** – Wind Turbine Noise and Health Study: Summary of Results	Michaud
09:10	Findings of the Council of Canadian Academies Expert Panel on Wind Turbine Noise and Human Health	Howe
09:30	Impact of windturbine noise on local residents in mountainous terrain at Lista Windfarm, South Norway	Vagene
09:50	Compliance isn't everything	Large
10:10	Noise from wind turbines and health effects - Investigation of wind turbine noise spectra	Sondergaard
10:30	Discussion	
10:50	Break	
	Regulations 1	
11:10	Comparative analysis of wind turbine noise assessment and rating procedures in the UK, France and the Netherlands	Goeme
11:30	The use of cumulative wind turbine noise related planning conditions	Mackay
11:50	State of the art and new perspectives for the development of noise regulation of wind farms	Schild
12:10	A history of wind turbine noise regulations in the Netherlands	van den Berg (GP)
12:30	Discussion	
12:55	Lunch	
	Receiving Environment	
13:55	From good practice guidance to solving amplitude modulation for wind turbine noise assessment in the UK	Perkins
14:15	Wind turbines - A changed environment	Palmer
14:35	Modelling of house filter for wind turbine noise	Tachibana
14:55	Discussion	
15:10	Break	
	Tonal noise	
15:30	Assessment of tonal components contained in wind turbine noise in immission areas	Kobayashi
15:50	Tonal noise from wind turbines	Evans
16:10	Reduction of tonalities in wind turbines by means of active vibration absorbers	Engelhardt
16:30	Discussion	
16:45	Presentations end	

Wednesday 22nd April 2015 - Oral Presentations - Hall 1		
	Aeroacoustic Noise Source 1	
08:30	**PLENARY** - Basic principles and evidences of wind turbine noise generation mechanisms	Bertagnolio
09:05	Impact on flow topology of solid and permeable trailing edge serrations at incidence on cambered and symmetric airfoils	Arce
09:25	Aeroacoustic simulation of an airfoil in turbulent inflow	Illg
09:45	Displacement thickness evaluation for BPM-Type Airfoil-TE noise prediction model	Saab
10:05	Simulation of broadband trailing-edge noise - Influence of airfoil shape and flow characteristics	Rautmann
10:25	Discussion	
10:45	Break	
	Aeroacoustic Noise Source 2	
11:05	Numerical simulation of airfoil trailing edge serration noise	Zhu
11:25	On the measurement and prediction of wind-turbine trailing-edge noise	Stalnov
11:45	Development of a high-fidelity noise prediction and propagation model for noise generated from wind turbines	Debertshauser
12:05	On predicting wind turbine noise and amplitude modulation using Amiet's theory	Sinayako
12:25	Discussion	
12:45	Lunch	
	Aeroacoustic Noise Source 3	
13:45	On the noise prediction of a serrated DU96 airfoil using the Lattice Boltzmann Method	van der Velden
14:05	An experimental and numerical parameter study on trailing edge blowing for reduced trailing edge noise	Gerhard
14:25	Aeroacoustic wind tunnel experiment for serration design optimisation and its application to a wind turbine rotor	Hurault
14:45	Icing of wind turbines and the effect on noise - Long-term measurements	Appelqvist
15:05	Experimental characterization of stall noise toward its modelling	Bertagnolio
15:25	Discussion	
15:50	Break	
	Small Turbines	
16:10	Noise reduction for small wind turbine by trailing edge modification	Yamagata
16:30	Noise directivity from a vertical axis wind turbine	Mollerstrom
16:50	Numerical investigation of the aeroacoustics of small vertical axis wind turbines	Weber
17:10	Discussion	
17:25	Presentations End	

Wednesday 22nd April 2015 - Oral Presentations - Hall 2		
08:30	See Hall 1	
	Background Noise and Turbine Noise at Receivers -1	
09:05	Background noise map creation through a CFD wind model	Bartolazi
09:25	Methods for assessing background sound levels during post-construction compliance monitoring within a community	Duncan
09:45	Wind turbine noise measurement: An efficient and reliable method for extracting the wind turbine noise out of the background noise	Trefois
10:05	Practical measurement method of wind turbine noise	Fukushima
10:25	Discussion	
10:45	Break	
	Background Noise and Turbine Noise at Receivers -2	
11:05	Spectral discrete probability density function of measured wind turbine noise in the far field	Ashtiani
11:25	Research into a continuous wind farm noise monitoring system	Delaire
11:45	Noise optimized wind park operation	Petitjean
12:05	Wind Farm Noise Optimisation Tool	Fotheringham
12:25	Discussion	
12:45	Lunch	
	Infrasound	
13:45	Progress report on synthesis of wind turbine noise and infrasound	Walker
14:05	Response to simulated wind farm infrasound including effect of expectation	Tonin
14:25	Perception and annoyance of low frequency noise versus infrasound in the context of wind turbine noise	Hansen
14:45	On the overlap region between wind turbine infrasound and infrasound from other sources and its relation to criteria	Leventhall
15:05	Health-based audible noise guidelines account for infrasound and low frequency noise produced by wind turbines	Berger
15:25	Discussion	
15:50	Break	
	Regulations 2	
16:10	Noise protection regulations for wind turbines in Germany	Bauerdorff
16:30	Sensitivity analysis test on the Italian ISPRA-ARPAT methodology to assess noise impact of operational wind farms	Fredianelli
16:50	Parsimonius regulations for wind turbine noise	van den Berg (M)
17:10	Discussion	
17:25	Presentations End	

Thursday 23rd April 2015 - Oral Presentations		
	Amplitude Modulation 1	
08:30	**PLENARY** - An overview of recent research on AM and OAM of wind turbine noise	Madsen
09:00	The Institute of Acoustics' Working Group on Amplitude Modulation - Progress towards an agreed rating and assessment metric	Irvine
09:20	Measurements demonstrating mitigation of far-field AM from wind turbines	Cand
09:40	Addressing the issue of enhanced amplitude modulation: A developer's perspective	Cassidy
10:00	Current challenges of assessing excess amplitude modulation character in wind turbine noise during EIA/planning phase	di Napoli
10:20	Discussion	
10:45	Break	
	Amplitude Modulation 2	
11:05	Can we really predict wind turbine noise with only one point source?	Ecotiere
11:25	Time-dependent interference: The Mechanism Causing Amplitude Modulation Noise?	Bradley
11:45	Low frequency amplitude modulation related to Doppler frequency shift: An experimental study of a 101m diameter wind turbine in a Swiss valley	Falourd
12:05	Detection of amplitude modulation in Southern Ontario wind farms	Halstead
12:25	Discussion	
12:45	Lunch	
	Amplitude Modulation 3	
13:45	Cotton Farm Wind Farm - long term community noise monitoring project - 2 years on	Stigwood
14:05	Affective response to amplitude modulated wind turbine sound	Von Hunerbein
14:25	Subjective experiments on the auditory impression of the amplitude modulation sound contained in wind turbine noise	Yokoyama
14:45	Indoor simulation of wind turbine amplitude modulated noise	Fernandez
15:05	Overview of IEEE standard development on amplitude modulation noise measurement	Xue
15:25	Discussion	
15:50	Closing	
16:00	Conference Ends	