7th International Conference on Wind Turbine Noise

Day	Start	Session	Subject	Chair
Tuesday	08:30		Registration	
	11:00		Opening	
	11:05	A	Perception and Health Effects - 1	
	13:30	B	Aspects of Source Noise - 1	
	15:40	C	Amplitude Modulation - 1	
	17:15	D	Poster and Exhibition Drinks	
Wednesday	08:30	E	Perception and Health Effect - 2	
	10:15	F	Perception and Health Effect - 3	
	11:40	G	Guest Speaker - 1	
	13:40	H	Shadow Flicker	
	15:50	I	International Perspectives	
	17:15	J	Poster Workshop - Propagation and Background Noise	
Thursday - Hall 1	08:30	K	Assessment and Compliance - 1	
	10:40	L	Assessment and Compliance - 2	
	13:30	M	Low Frequency and Tones	
	15:40	N	Infrasound	
	17:15	O	Seminar: Aeroacoustic investigation of noise sources	
Thursday - Hall 2	08:30	P	Validation of TE Modelling	
	10:40	Q	Combined Modelling	
	13:30	R	Trailing Edge Serrations	
	15:40	S	Source Localisation and Identification	
	17:15	T	Workshop - TBC	
Thursday	19:30		Conference Dinner - De Majesteit	
Friday	08:30	U	Amplitude Modulation - 2	
	10:15	V	Amplitude Modulation - 3	
	11:40	W	Guest Speaker - 2	
	13:20	X	Aspects of Source Noise - 2	
	15:10		Conference Ends	

Details on the following pages

All items on the Programme are open to Delegates

Where the lead author is not presenting the presenter is in (brackets)

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Poster Presentations

Group	Title	Author
A - Background Noise	Background Noise Variability Relative to Wind Direction, Temperature, and Other Factors	Pellerin
	Efficient tools for assessing the emergence, audibility and masking potential of wind turbine noise by background noise	Bollinger
	Variation of wind induced non-turbine related noise due to position, shelter, wind direction and season	Sondergaard
B - Regulations	Evaluation of Wind Turbine Noise in Japan	Nameki
	Noise guidelines for countries where no national regulations are available. A discussion of the IFC EHS Guidelines for Wind Energy	Dutilleux
	Environmental Impact Assessment of Wind Power Generation Plan in Korea	Sun
C - Propagation	Assessment of the error between measured and predicted noise levels from wind farms	Schillemans
	Sound propagating from wind turbines in winter conditions	Conrady
	Wind turbine noise prediction using Olive Tree Lab Terrain	Bigot
	Annual investigation of sound propagation from a boreal wind park	Bolin
	Comparison of measured and calculated noise levels in far distances of wind turbines	Kock (Cruz)
	Comparison of Sound Propagation Models for Offshore Wind Farms	Du
D - Source Noise	Noise measurement on a Small Wind Turbine preliminary results	Amadio
	Verification and Validation of the “PNoise” Airfoil Trailing-Edge Noise Prediction Module inside “Qblade”	Saab

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Tuesday 2nd May		
11:00	**Opening - Gijsjan van Blokland** **President of the Acoustical Society of the Netherlands**	
	Perception and Health Effects - 1	
11:05	Partial masking and the perception of wind turbine noise in ambient sounds	Johansson (Bolin)
11:25	Wind Turbine Noise Dose Response - Comparison of Recent Studies	Old
11:45	Impact of noise from suburban wind turbines on human well-being	Qu
12:05	Discussion	
12:30	Lunch	
	Aspects of Source Noise - 1	**Jean Tourret**
13:30	Sound power level measurements 3.0	Eilders
13:50	Analysis of sound emission by using amplitude modulation components of wind turbine noise	Okada
14:10	Modelling activities in wind turbine noise aeroacoustics at DTU Wind Energy	Shen
14:30	Long-term experimental campaign on an operating wind turbine for trailing edge serrations verification	Lauret-Ducosson
14:50	Discussion	
15:20	Break	
	Amplitude Modulation - 1	
15:40	Development of an approach to controlling the impact of amplitude modulation in wind turbine noise: exposure-response research, application and implementation	Perkins
16:00	An investigation into correlation between strong wind turbine amplitude modulation and environmental conditions	Halstead
16:20	Extended simulations of wind noise contamination of amplitude modulation ratings	von Hunerbein
16:40	Discussion	
17:15	Introduction of Posters and Exhibitions. Drinks reception for all delegates.	
18:45	Close	

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Wednesday 3rd May 2017		
	Perception and Health Effect - 2	
08:30	Low-frequency noise incl. infrasound from wind turbines and other sources	Herrmann
08:50	Why do some people believe that they are “made ill” by wind turbine noise	Leventhall
09:10	Wind turbine noise – An overview of current knowledge and perspectives	Bauerdorff
09:30	Discussion	
09:55	Break	
	Perception and Health Effect - 3	
10:15	A 'social review' of wind turbine noise	van den Berg
10:35	Human response to wind turbine noise: infrasound and amplitude modulation	Feist
10:55	Wind turbines in hilly terrain – Response of residents to sound disturbance related to sound and meteorological measurements	Sjoblom
11:15	Discussion	
	Guest Speaker - 1	
11:40	TBC	
12:40	Lunch	
	Shadow Flicker	
13:40	International Legislation and Regulations for Wind Turbine Shadow Flicker Impact	Koppen
14:00	The development and limits of the German shadow flicker guidelines	Ritter
14:20	The visual effects of wind turbines in Japan	Yano
14:40	Presenting insights from shadow flicker compliance monitoring	Longbottom (Mackay)
15:00	Discussion	
15:30	Break	
	International Perspectives	
15:50	Addressing a management strategy of Wind Farms Noise Control in Chile	Parra
16:10	Comparison of Measured and Modelled Wind Turbine Noise in Indian Terrain	Arivukkodi
16:30	A new characterization of wind turbine noise from Life Cycle Assessment	Rivarola
16:50	Discussion	
17:15	Workshop on Poster Subjects. Sound propagation and Background Noise	
18:45	Close	

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Thursday 4th May 2017 - Hall 1		
	Assessment and Compliance - 1	
08:30	Experience of reviewing wind farm noise assessments for Scottish local authorities and the implementation of the IOA Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise	Summers
08:50	Evaluation of wind farm noise in Switzerland – Comparison between measurement and modeling	Desarnaulds
09:10	A case study of how to involve impacted neighbours in measuring and characterizing windfarm noise	Vagene
09:30	A Rigorous Method of Addressing Wind Turbine Noise	Palmer
09:50	Discussion	
10:20	Break	
	Assessment and Compliance - 2	
10:40	Assessment of WTN by separating residual noise without the farm shutdown: Validation of the Italian procedure	Fredianelli (Carpita)
11:00	Characterizing the acoustic noise from wind turbines by using the divergence of the sound pressure in the ambient	Buzduga
11:20	Using long term monitoring for noise assessment of wind farms	de Beer
11:40	The Challenges and Benefits of Long-Term Noise Monitoring of Wind Farm Sites	Brush
12:00	Discussion	
12:30	Lunch	
	Low Frequency and Tones	
13:30	Tonal noise mitigation on wind turbines	Marmo
13:50	Origin, Transfer and Reduction of Structure-Borne Noise in Wind Turbines	Schneider (Hanus)
14:10	Low-frequency micro-seismic radiation by wind turbines and it's interaction with acoustic noise emission	Gortsas (Kudella)
14:30	Subjective experiments on the perception of tonal component(s) contained in wind turbine noise	Yokoyama
14:50	Discussion	
15:20	Break	
	Infrasound	
15:40	Propagation through a turbulent atmosphere makes blade passage harmonics audible	Richarz
16:00	The assessment of hearing thresholds in the presence of infrasound	Zajamsek
16:20	Measurement Techniques for determining Wind Turbine Infrasound Penetration into Homes	Metelka
16:40	Discussion	
17:15	Seminar by TU Delft and GRAS: Aeroacoustic investigation of noise sources: measurements and computations	
18:45	Close	

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Thursday 4th May 2017 - Hall 2		
	Validation of TE Modelling	
08:30	Computational Aeroacoustics of Small Vertical Axis Wind Turbines by Applying a Hybrid Approach	Weber
08:50	High Fidelity Airfoil Trailing Edge Noise Predictions via Lattice-Boltzmann Simulations	Manegar
09:10	Small Horizontal Axis Wind Turbine: Aeroacoustic and Aerodynamic Optimization of Airfoil and Blade	Volkmer
09:30	Predicted and Measured Trailing-Edge Noise Emission for a 2.3 MW Wind Turbine	Hornung
09:50	Discussion	
10:20	Break	
	Combined Modelling	
10:40	Coupled wind turbine noise generation and propagation model: A numerical study	Bertagnolio
11:00	A Comprehensive Hamiltonian Ray Tracing Technique for Wind Turbine Noise Propagation under Arbitrary Weather Conditions	McBride (Burdisso)
11:20	Investigation of Amplitude Modulation Noise with a Fully Coupled Noise Source and Propagation Model	Barlas
11:40	Aeroacoustic simulation of multiple wind turbine source interaction	Robin
12:00	Discussion	
12:30	Lunch	
	Trailing Edge Serrations	
13:30	Acoustic measurements of a DU96-W-180 airfoil with flow-misaligned serrations at a high Reynolds number in a closed-section wind tunnel	Merino-Martinez
13:50	Trailing edge serrations - effect of their flap angle on flow and acoustics	Arce Leon
14:10	An Experimental Parametric Study of Airfoil Trailing Edge Serrations	Carolus
14:30	Wind Turbine Rotor Noise Prediction and Reduction for Low Noise Rotor Design	Kamruzzaman
14:50	Discussion	
15:20	Break	
	Source Localisation and Identification	
15:40	Modelling and localizing low frequency noise of a wind turbine using an array of acoustic vector sensors	Fernandez Comesana
16:00	Use of the Acoustic Camera to accurately localise wind turbine noise sources and determine their Doppler shift	Bradley
16:20	Wind turbine sound prediction: Modelling and case study on the effect of blade elasticity	Schorle
16:40	Discussion	
17:15	**In Hall 1** - Seminar by TU Delft and GRAS: Aeroacoustic investigation of noise sources: measurements and computations	
18:45	Close	

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Friday 5th May 2017		
	Amplitude Modulation - 2	
08:30	The occurrence of nocturnal wind farm rumbling noise	Hansen
08:50	Pre-construction Site Prediction Tool for Wind Farm AM - Do We Now Know Enough?	Birchby
09:10	An Investigation into Short-Term Fluctuations in Amplitude Modulation of Wind Turbine Noise. Preliminary Results	Bonsma
09:30	Discussion	
09:55	Break	
	Amplitude Modulation - 3	
10:15	Application of the UK IOA Method for Rating Amplitude Modulation	Coles
10:35	Comparison of the IOA method and Japanese F-S method for quantitative assessment of amplitude modulation of wind turbine noise. A study based on the field measurement results in Japan	Fukushima
10:55	Putting the IOA preferred AM assessment method and the proposed penalty scheme into practice - an outlook for future developments of wind farms in the UK	Lowe
11:15	Discussion	
	Guest Speaker - 2	
11:40	Willem Roose, Professional Miller, will talk about the history of windmills internationally, attempts at generating electricity and his own experience of environmental noise.	
12:20	Lunch	
	Aspects of Source Noise - 2	
13:20	An investigation into the effect of wind shear on the sound emission of wind turbines	Ashtiani
13:40	Variations in measured noise emission of wind turbines due to local circumstances	van der Maarl
14:00	Vertical directivity observations based on statistics of low frequency tonal components measured at downwind and upwind locations.	Falourd
14:20	Wind turbine noise measurements in controlled conditions	Boorsma
14:40	Discussion	
15:05	Closing	
15:10	Conference Ends	