

Tenth International Meeting

on

Wind Turbine Noise

Dublin

21st to 23rd June 2023

Abstracts accepted

Presentations will be either oral, poster or part of a workshop session.

Methods for addressing variable turbine operations during wind farm noise compliance monitoring

Justin Adcock, Alex Stoker, Christophe Delaire

Noise prediction for Wind Energy Turbines based on CAA methods

Christina Appel

A comparison of wind data sources for wind farm noise compliance assessments

Jason Baldwin, James Mackay, Alex Dell

Evaluation of real noise effect inside the dwelling with open windows, a methodology

Andrea Bartolazzi, Gabriele Giovannageli, Matteo Settimj

A Year in Review: ANSI's new standard for Wind Turbine Sound Predictions

Mark Bastasch

Guidelines for Environmental Assessment of Wind Farm Noise in Chile

Nicolás A. Bastián-Monarca, Jorge P. Arenas

Detection and assessment of amplitude-modulated noise of wind turbines

Andrea Bauerdorff, Dr. Till Kühner

Wind turbine noise code benchmark: a comparison and verification exercise

Franck Bertagnolio, Andreas Fischer, Christina Appel, Michaela Herr, Ferdinand Seel, Thorsten Lutz, Koen Boorsma, Gerard Schepers, Damiano Casalino, Wouter van der Velden, Carlo Sucameli, Pietro Bortolotti

Optimizing the locations of turbines in a wind farm according to acoustic and spatial constraints

Alexis BIGOT, Marwen BEJAOUJ

Amplitude modulation in the vicinity of a wind farm in complex terrain

Esther Blumendeller, Po Wen Cheng

Adaptive Tuned Mass Dampers for Reduction of Speed-dependent Vibrations

Alexander Busch, Benjamin Marrant (ZF Wind Power Antwerpen NV)

Wind farm compared to road traffic noise onset induced arousal responses during sleep
Peter Catchaside, Bastien Lechat, Gorica Micic, Hannah Scott, Kristy Hansen, Duc Phuc Nguyen, Claire Dunbar, Tessa Liebich, Barbara Toson, Felix Decup, Andrew Vakulin, Nicole Lovato, Leon Lack, Colin Hansen, Dorothy Bruck, Ching Li Chai-Coetzer, Branko Zajamsek

No discernible effect of wind farm infrasound exposure on electroencephalographic markers of sleep disturbance

Peter Catchaside, Claire Dunbar, Duc Phuc Nguyen, Bastien Lechat, Hannah Scott, Kristy Hansen, Branko Zajamsek, Gorica Micic, Tessa Liebich, Andrew Vakulin, Leon Lack, Peter Catchaside

Exploring the effect of wind farm flow on wind turbine noise propagation through numerical simulations

Jules Colas, Ariane Emmanuelli, Didier Dragna, Richard Stevens, Philippe Blanc-Benon, Benjamin Cotté

TIMELINE OF EMERGENCE

Alexandre CREDOZ

Apportionment of wind farm noise limits: Observations from using UK good practice guidance
Alex Dell, James Mackay

Wind turbine noise exposure of the French population in 2022

David Ecotiere, Chiappini, Giorgis-Allemand, Evrard

Noise curtailment plans and manufacturer constraints

Arthur Finez

Optimising turbine parameters to meet an 'n' decibel reduction in sound power for specified weather conditions.

Merlin Garnett, Kira Marshall, Cameron Sutherland

On the relationship between noise modes and yield loss

Merlin Garnett, Kira Marshall, Cameron Sutherland

Do measured immission data support the accepted norms on wind turbine propagation directivity as per the 'joule project' and NASA studies and is wind speed a significant variable?

Merlin Garnett, Kira Marshall, Cameron Sutherland

4. The use of proxy monitoring locations to assess planning compliance at receptor distances.

Merlin Garnett, Kira Marshall, Cameron Sutherland

EXPERIMENTAL INVESTIGATION AND VALIDATION OF MEASURED WIND TURBINE NOISE CHARACTERISTICS USING STANDARDIZED TECHNOLOGY

Dr. ARIVUKKODI GUNASEKARAN

Tone propagation and receptor levels

Mranal Gupta, Mark Hempel, Kaj Dam Madsen

Study on the Capabilities of a TNO-Based Trailing Edge Noise Prediction Tool Applied to Boundary Layer Suction on a NACA 64-418 Airfoil

Sabrina Haubold, Ferdinand Seel, Thorsten Lutz, Andrea Beck, Ewald Krämer

Analysis of Mitigation Measures for Wind Turbine Noise Annoyance – A field experiment in the interdisciplinary project Inter-Wind

Gundula Huebner, Florian Johannes Yanic Müller, Valentin Leschinger, Johannes Pohl

Practical application of standard 61400-11 : lessons learned on a case study

Fabrice JUNKER, Thomas QUILLET

Wind Turbine Tonality - A holistic approach to its prediction and mitigation

Emre Kanpolat, Sebastian Schmidt, Ben Marrant

A Study on Sound Propagation of Mid-Speed Drivetrains and how to avoid Tonality Issues

Alexander Kari, Cardaun, Schünemann, Schelenz, Sigle

WindTUNE: a new tool for modelling wind farm noise uncertainties

Bill Kayser, Bianchetti, Ecotièrre, Gauvreau

Socio-psychological effects of wind turbine noise: research activities of IEA Wind TCP Task 39 (Work Packages 4 & 5)

Eoin King, Eugene McKeown, Denis O’Hora, Lars Sommer Søndergaard, Erik Thysell, Daphne Schössow, Stephan Preihs, Jürgen Peissig, Gundula Hübner, Florian Johannes Yanic Müller, Esther Blumendeller, Gu Tiancheng Zhejiang

Controversies of noise: How different networks of expertise understand the issue of wind turbine noise - and to different degrees succeed in impacting policy and regulation

Julia Kirch Kirkegaard, Sophie Nyborg, Tom Cronin, Danial Nordstrand Frantzen, Maja Horst

Noise forecast app: positively impacting non-acoustic factors

Erik Koppen, Madelon Ekelschot-Smink, Jaap Boon

Standards for regulating environmental impact of wind turbines

Erik Koppen, Madelon Ekelschot-Smink

Experience using the IOA AM method, and how the results may vary with distance and direction

Tom Levet

Noise assessment guidance for wind turbines: A scoping review, stakeholder engagement and field measurements, including appraisal of the possible causes, contributing factors, methods of measurement, potential effects and approaches to controlling amplitude modulation.

Michael Lotinga, Toby Lewis, James Powlson, Bernard Berry

Experimental investigation of noise from a wall-mounted swept tip blade in a wind tunnel

Oliver Lylloff, Andreas Fischer

Influence of boundary layer height on the downwind sound propagation from a 5 MW wind turbine

Neeraj Paul Manelil, Keerthana Mohan, Johannes Nicolaas Theron, Leo Höning, and Bernhard Stoevesandt

Wind turbine noise reduced operations – description and measurement

Isaac Old, Timothy Carson

How Misinformation Derails Discussions for Permitting of Wind Turbine Energy Projects

Christopher Ollson, Mark Bastasch, Alan Anderson, Loren Knopper, Geoff Leventhall

Closing In on the Wind Turbine "Sasquatch" - Whose Name is Annoyance

William (Bill) Palmer

Continuous monitoring of wind turbine noise

Vitor Rosao

Uncertainties on measured and predicted noise levels for wind farms. Do we need it?

Bo Søndergaard

The masking effect of vegetation- and wave noise on wind turbine noise audibility

Lars Sommer Søndergaard, Rune Egedal, Franck Bertagnolio, Andreas Fischer

A comparison of methods for identifying wind turbine sounds in big data sets

Daphne Schössow, Susanne Könecke, Stephan Preihs, Tobias Bohne, Raimund Rolfes, Jürgen Peissig

Schall_KoGe - measurements, simulations, and validation of wind turbine noise in complex terrain

Arthur Schady, Tanja Stuetzchen, Katharina Eisen

Numerical Study on Reduction of Blunt Trailing Edge Noise by the Use of Vortex Generators

Ferdinand Seel, Lando Blazejewski, Thorsten Lutz, Ewald Krämer

High resolution analysis of measurements, and comparison of models for long distance noise propagation over water for an elevated height-adjustable sound source

Erik Thysell, Rune Egedal, Lars Sommer Søndergaard, Thomas Sørensen, Franck Bertagnolio, Andreas Fischer

Evolution of sound production of onshore wind turbines

Frits van denBerg, Erik Koppen, Steven Velthuisen

Full-Scale Serrated Wind Turbine Trailing Edge Noise Certification Analysis Based on the Lattice-Boltzmann Method

Wouter van der Velden, Damiano Casalino, Gianluca Romani

Wind energy and health: the Dutch case

Ric van Poll, Anne Bolder, Marije Reedijk

Aero-acoustic prediction tool for complex wind turbine blade configurations

Guannan Wang, Jeremy Hurault, Andreas Herrig, Ramakrishnan R., Marc Canal, Carlo-Enrico Carcangiu

Sectoral Character Analysis In Line with IEC 61400-11-2

Robin Woodward

Tests of windshields for infrasound noise measurements from wind turbines

Tadeusz WSZOŁEK, Maciej KACZYŃSKI, Paweł PAWLIK, Bartłomiej STĘPIEŃ, Paweł MAŁECKI Dominik MLECZKO

Computational study on the aeroacoustics of the X-Rotor - a hybrid vertical-horizontal axis wind turbine

Yan Wu, Damiano Casalino, Francesco Avallone, Daniele Ragni