

RUB



Seminars/Workshop about Vortex-Induced Vibrations on wind turbine support structure and more

VIV Symposium 2024

June 6th - 7th, 2024

Bergbaumuseum and Ruhr-Universität Bochum
Bochum, Germany

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(DFG, German Research Foundation)
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Organizing committee and contacts

Rüdiger Höffer - Ruhr University Bochum
Francesca Lupi – Niemann Ingenieure GbR
Marc Seidel – Siemens Gamesa
Renewable Energy
Ika Kurniawati – Ruhr University Bochum

ika.kurniawati@ruhr-uni-bochum.de
+49 (0)234 32 25640

elke.koester@ruhr-uni-bochum.de
+49 (0)234 32 26141

Universitätsstraße 150 D-44801 Bochum

Introduction

The Institute of Wind Engineering and Fluid Mechanics of the Ruhr-University Bochum, in cooperation with Siemens Gamesa Renewable Energy, is conducting a DFG research project to investigate and promote knowledge transfer on aeroelastic phenomena on wind turbine towers. Using full-scale measurements of wind pressures and tower response on wind turbine tower prototypes in Østerild, the ongoing research aims to address and further establish the knowledge of vortex-induced vibration (VIV) and Reynolds number disparity. The collaboration is also looking at the interference effects of wind turbine towers in groups. The investigations lead to potential new approaches which may be considered for certification of onshore and offshore wind turbines.

In line with the objectives and the research work program, we are pleased to invite you to a comprehensive workshop and seminar to elaborate, discuss and exchange knowledge for the further development of wind energy.

Technical Information

Participation fee: 160 EUR
Including services

Topics

- Aeroelasticity
- Vortex-Induced Vibration on slender towers (1st and 2nd Mode)
- Field measurements for VIV
- Interference effects in tower groups
- Standards and codification, e.g., Eurocode, CICIND, IEC 61400-6

Register now



Scan to register or
<https://tally.so/r/wAdLpk>

Program schedule*

*Pre-final program, minor changes may occur

Technical information

Time	Thursday June 6th, 2024	Time	Friday June 7th, 2024
09:30-10:00	Arrival in Bochum/Registration/Coffee Start	09:30-09:45	Arrival/Registration/Coffee Start
10:00-10:30	Opening	09:45-10:20	P09 - Frank Kemper, RWTH Aachen, Germany "Vortex correlation length and aerodynamic properties of cantilever slender structure and wind turbine support structure"
10:30-10:40	DFG Transfer Project Modelling the aeroelastic response of slender structures to vortex-induced vibrations: Industry transfer through full-scale experimental campaign at a wind turbine Francesca Lupi, Rüdiger Höffer, Marc Seidel	10:20-10:55	P10 - Pascal Hemon, LadHyX, CNRS-Ecole Polytechnique, France "VIV and unsteady pressure loads measured on a full scale chimney"
10:40-11:15	P01 - Ika Kurniawati - Ruhr-Universität Bochum, Germany DFG Research Report "Fluid-structure interactions of large wind turbine support structures explored through full-scale investigation"	10:55-11:30	P11 - Vincent Denoël, University of Liege, Belgium "Slow phase model for vortex-induced vibrations with turbulent flow"
11:15-11:30	Coffee break	11:30-12:30	Lunch break
11:30-12:05	P02 - Francesca Lupi, Niemann Ingenieure GbR, Germany "Interference effects on tower groups"	12:30-13:30	P12 - Codes and Standards Session Rüdiger Höffer – Ruhr-Universität Bochum, Germany "The new generation of Eurocode EN-1991-1-4: Wind actions" Svend Ole Hansen – Svend Ole Hansen ApS, Denmark "VIV in structural codes: Eurocode and other codes"
12:05-12:40	P03 - Teis Schnipper – Svend Ole Hansen ApS, Denmark "VIV in cylinder clusters"	13:30-13:40	Closing speech
12:40-13:40	Lunch break and group photo session	13:45-15:15	Optional - Guided tour: German Mining Museum
13:40-14:15	P04 - Günter Schewe - DLR, Institute of Aeroelasticity, Germany "Ultra-high Reynolds number effects on circular cylinders in cross-flow with smooth surface"	15:15	Departure from Bochum
14:15-14:50	P05 - Nils van Hinsberg - DLR, Institute of Aerodynamics and Flow Technology, Germany "Single and tandem cylinders and rounded square-section prisms in cross-flow: influence of Reynolds number, incidence angle, edge roundness, surface roughness, and gap spacing"		
14:50-15:10	Coffee break		
15:10-15:45	P06 - Hakon Christensen – Vestas, Denmark "VIV/IG Prevention Strategies – Vestas perspective"		
15:45-16:20	P07 - Siemens Gamesa Renewable Energy "VIV/IG Prevention Strategies – SGRE perspective"		
16:20-16:55	P08 - K. Hoffmann - DNV Denmark A/S "Challenges in VIV assessment as experienced by a certification body"		
18:00	Dinner and visit to WIST Atmospheric Boundary Layer Wind Tunnel		

The following technical information can be used to help organize your travel:

- Hotel suggestions: Mercure Hotel, B&B Hotel, Ibis Hotels, Hotel Acora. Each hotel has its own website for bookings, additionally professional agencies e.g. Booking.com etc. can be used.
- To reach Bochum: Train to Bochum Hbf, travel by car, or nearby flights to Düsseldorf International Airport
- Nearby stations: Essen Central Station (Essen Hbf), Dortmund Central Station (Dortmund Hbf)