

Monday September 25th – Plenary hall 1

Plenary sessions

- 09.30 – 09.45 *IRPWind conference 2017* by **Peter Hauge Madsen**
IRPWind project coordinator,
Head of Department Wind Energy, DTU
- 09.45 – 10.00 *IRPWind in 2016/2017: status update* by **Mattias Andersson**
Senior Adviser, DTU Wind Energy
Work package leader “Integrating activities” in IRPWind
- 10.00 – 10.30 *Welcome from the European Commission* by **Piotr Tulej, European Commission**
Head of Unit Energy and Environment at European Commission

Sub-Programme 7 – Wind integration – economic and social aspects

Chair: Klaus Skytte (SP coordinator)

Facilitator: Martijn van Roermund

- 10.30 – 10.40 *Sub-programme meeting, status update*
Klaus Skytte, DTU Management
- 10.40 – 11.05 *Price based renewable energy roll-out in the North Sea region (NSON-DK) towards 2050*
Thure Traber, DTU
- 11.05 – 11.25 *Regulatory frameworks to activate TSOs cooperation in international offshore wind farms projects*
Claire Bergaentzlé, DTU
- 11.25 – 11.40 *Assessing and promoting the societal embedding of energy innovations*
Bianca Maria Poti, CNR
- 11.40 – 12.00 *Mapping Actor Value Perspectives on Wind Power Projects*
Kristian Borch, DTU
- 12.00 – 13.00 *Project proposal workshop, H2020 wp18-20*
Klaus Skytte, DTU Management

13.00 – 14.00 Lunch and poster session

Sub-Programme 5 – Offshore wind

Chair: John Olav Tande (SP coordinator)

Facilitator: Martijn van Roermund

- 14.00 – 14.15 *Progress of offshore wind energy research*
John Olav Tande, SINTEF
- 14.15 – 14.30 *Methodology for benchmark of offshore wind turbine models*
Pawel Gancarski, CENER
- 14.30 – 15.00 *Case 1: floating turbine free decay test*
Gordon Stewart, NTNU
- 15.00 – 15.30 *Case 2: fixed turbine eigen frequency evaluation*
David Robert Verelst, DTU
- 15.30 – 16.00 *Wind farm models and control systems*
Olympo Anaya-Lara/Alexander Giles, University of Strathclyde
- 16.00 – 16.30 *Summing up, concluding remarks, final Q&A*
John Olav Tande, SINTEF

Plenary sessions

- 16.30 – 17.00 *Escalated Conflicts caused by wind projects*
Vera de Jong, Graduate intern, ECN Policy Studies
- 17.00 – 17.30 *Airborne wind energy system*
Bernard van Hemert, Project Manager Offshore, Ampyx
- 17.30 – 18.15 Drinks and poster session
- 18.15 – 18.45 Bus to dinner location
- 19.00 – 22.00 Dinner cruise
- 22.00 – 22.30 Bus back to conference location

Monday September 25th – Plenary hall 2

- 09.30 – 10.30 **No activities**

Sub-Programme 2 – Aerodynamics

Chair: Peter Eecen (SP coordinator)

Facilitator: Koen Hermans

- 10.30 – 11.00 *Status of the sub-programme*

Peter Eecen, ECN

Special topic presentations: Unknowns and uncertainties in aerodynamics and aero-elastics with large impact on the design and operation of 125+m blades (250+m rotors)

- 11.00 – 11.30 *Uncertainty quantification in the aeroservoelastic simulation of wind turbines*

Carlo Bottasso, TU Munich

- 11.30 – 12.00 *Aerodynamics issues addressed in the EU proposal WindFusion*

Carlos Simao Ferreira, TU Delft

- 12.00 – 13.00 *Aeroelasticity in AVATAR: An overview on the results and conclusions with some reference to design*

Spyros Voutsinas, NTUA

- 13.00 – 14.00 Lunch and poster session

Sub-Programme 8 – Cold Climate

Chair: Ville Lehtomäki (SP coordinator)

Facilitator: Lesly Barton-Stam

- 14.00 – 14.20 *Cold climate Sub Program introduction*

Ville Lehtomäki, VTT

- 14.20 – 14.40 *Weather modelling of icing*

Neil Davis, DTU

- 14.40 – 15.00 *SHM, fatigue and composites in CC*

Tanja Griessmann, ForWind/University of Hannover

- 15.00 – 15.20 *Low temperature in climate chamber*

Pieter-Jan Jordaens, SIRRIS/OWI-Lab

- 15.20 – 15.40 *Icing Wind Tunnel testing of sensors*

Ville Lehtomäki, VTT

- 15.40 – 16.00 *Industry workshop*

Side events

Room 1 (1.06)

IRPWind Open data and data management

Chaired by Mattias Andersson

12.00 – 12.15

Taxonomy and metadata for wind energy

Anna-Maria Sempreviva, DTU

12.15 – 12.30

Requirements to a metadata search portal for wind energy

Pawel Gancarski, CENER

12.30 – 13.00

Discussion with participants

14.00-16.30

NSON Event

IWES will open the session followed by a presentation of the status of the ongoing NSON national projects - Philipp Härtel (IWES) and Nikolaos Ctutlulis (DTU).

Afterwards, the session will work out ideas and proposals for a continuation of the NSON initiative:

- towards an interconnected HVDC / AC grid to manage bulk of wind power in Europe
- coupling NSON and energy island initiative
- NSON and European grid planning projects

To work out next steps and a roadmap for the continuation of the NSON initiative, the workshop will give a good platform.

Room 2 (2.09)

IRPWind WP5 – Mobility within EERA JP Wind

Chaired by Claudia Calidonna

10.50 – 11.10

The IRPWind mobility programme

Claudia Calidonna, CNR

11.10 – 11.30

EERA Mobility Task force

Anna Maria Sempreviva, DTU

11.30 – 12.30

Experiences from grantees

Several speakers

12.30 – 13.00

Towards best mobility scheme – open discussion

CL-Windcon event

Chaired by Mikel Iribas

15.00 – 15.15

CL-Windcon – Challenges for the new wind farm control paradigm

Mikel Iribas, CENER

15.15 – 15.30

Developments in multi-fidelity wind flow modelling for wind farm control

T.B.D., University of Stuttgart

15.30 – 15.45

Wind farm control technologies

Bart Doekemeijer, TU Delft

15.45 – 16.00

CL-WINDCON wind tunnel testing; plan and status update

Carlo Bottasso, Technical University Munich, PoliMi

Tuesday September 26th – Plenary hall 1

Plenary sessions

09.00 – 09.30 *Energy Island*
Wilfried Breuer, Executive Board Tennet

Sub- Programme 3 – Structural design and materials

Chair: Arno van Wingerde (SP coordinator)

Facilitator: Malene Pogager Jensen

09.30 – 10.00 *O&M after 2020*
Diego Allaix, TNO

10.00 – 10.30 *The future of blade and subcomponent testing*
Kim Branner, DTU

10.30 – 11.00 *Coffee break*

11.00 – 11.30 *A strong foundation for future windturbines*
Rasmus Eichstädt, ForWind

11.30 – 12.00 *“Generators for next-gen turbines”*
Henk Polinder, TU Delft

12.00 – 13.00 Lunch and poster session

Sub-Programme 1 – Wind conditions

Chair: Hans Ejsing Jørgensen (SP coordinator)

Facilitator: Alexander Vandenberghe

13.00 – 13.20 *Update on subprogramme*
Hans E. Jørgensen or Jake Badger, DTU

13.20 – 13.50 *The Perdigão experiment*
Jose Palma, University of Porto

13.50 – 14.20 *Measurement campaign and web portal*
Kristin Guldbrandsen Frøysa, CMR AS

14.20 – 14.50 *Low level jets of Fino 1 measurement and modelling*
Bjorn Witha, ForWind OL

14.50 – 15:10 *Taxonomy for Wind Europe*
T.B.C.

15.10 – 15.20 *Wrap up*
Hans E. Jørgensen or Jake Badger, DTU

Plenary sessions

15.30 – 16.00 *The Hywind Scotland project,*
Nenad Keseric, Head of Operations/Specialist Trading & Operations, Statoil

16.00 – 16.30 *The successes of the power curve working group (PCWG)*
Stathis Koutoulakos, Wind resource analyst, NUON/Vattenfall

16.30 – 17.00 *Closing of the conference*
Matthijs Soede, Research Programme Officer, European Commission

Tuesday September 26th – Plenary hall 2

09.00 – 09.30 **No activities**

Sub- Programme 6 – Research facilities

Chair: Antonio Ugarte (SP coordinator)

Facilitator: Martijn van Roermund

09.30 – 09.45 *Introduction and session program presentation*

Antonio Ugarte, CENER

09.45 – 09.55 *Joint Experiments in numbers*

Antonio Ugarte, CENER

10.00 – 10.20 IRPWind Joint Experiments: Progressing HVDC research

Paul McKeever, ORE Catapult

10.25 – 10.45 Ongoing activities – Open Science

Pawel Gancarski, CENER

10.50 – 11.10 Ongoing activities – EERA IP Showcase – the Technology Transfer Portal of IRPWind

Koen Hermans, ECN Wind Energy

11.15 – 11.35 Sweating the Assets: Utilising world-class test assets to underpin research activity

Chong Ng, ORE Catapult

11.40 – 12.00 Achievements, due's & Beyond IRPWind – activities and financing

Antonio Ugarte, CENER

12.00 – 13.00 Lunch and poster session

Sub-Programme 4 – Wind integration

Chair: Kurt Rohrig (SP coordinator)

Facilitator: Lesly Barton-Stam

13.00 – 13.20 Overview of SP activities

Kurt Rohrig, Fraunhofer IWES

13.20 – 13.40 HVDC & Offshore – latest R&D results

Olimpo Anaya Lara, UoS, Alev Akbulut, Fraunhofer IWES

13.40 – 14.00 System Service Provision through Optimal Control of Distributed WT's

Kaushik Das, DTU

14.00 – 14.20 Suitable overloading methods for FFC in MT-HVDC Grids

Nicolaos Cutululis, DTU

14.20 – 14.40 Forecasting, the latest results

Scott Otterson, Fraunhofer IWES, Bruno Schyska, ForWind

14.40 – 15.00 Market value of forecasts and bidding strategies

Hugo Algarvio, LNEG

15.00 – 15.20 Economic offshore grid structures and robustness to uncertainties

Harald Svendsen, SINTEF

15.20 – 15.30 Summary, wrap up, next events

Kurt Rohrig, Fraunhofer IWES

15.30 – 17.00 **No activities**

Tuesday September 26th – Side events

Room 1 (1.06)

9.30 – 12.00 TWG Offshore Wind (closed meeting)

13.00-15.30 **Operation and Maintenance workshop**

The workshop deals with O&M strategies for windfarms and seeks to gather specialists in that field with the explicit aim of setting up more long-term cooperation in that field, for instance in the form of a multi-national research project.

Contact: Diego Allaix, diego.allaix@tno.nl

25-Sep	Plenary hall 1	Plenary hall 2	Side events	
			Room 1 (1.06)	Room 2 (2.09)
8.30	Registration			
9.00	Registration			
9.30	Peter Hauge Madsen (DTU) - IRPWind conference 2017			
9.45	Mattias Andersson (DTU) - IRPWind in 2016/2017: status update			
10.00	Piotr Tulej (EC) - Welcome from the European Commission			
10.30	<p>SP7 - Wind integration - Economic and social aspects</p> <ul style="list-style-type: none"> - Sub-programme meeting, status update - Klaus Skytte, DTU - Price based renewable energy roll-out in the North Sea region (NSON-DK) towards 2050 - Thure Traber, DTU <p>- Regulatory frameworks to activate TSOs cooperation in international offshore wind farms projects - Claire Bergaentzlé, DTU</p> <ul style="list-style-type: none"> - Assessing and promoting the societal embedding of energy innovations - Bianca Maria Poti, CNR <p>- Mapping Actor Value Perspectives on Wind Power Projects, Kristian Borch, DTU</p> <ul style="list-style-type: none"> - Project proposal workshop, H2020 wp18-20 - Klaus Skytte, DTU 	<p>SP2 - Aerodynamics</p> <ul style="list-style-type: none"> - update on EERA JPWind Subprogramme Aerodynamics - Peter Eecen, ECN - Special topic presentations: Unknowns and uncertainties in aerodynamics and aero-elastics with large impact on the design and operation of 125+m blades (250+m rotors) - Uncertainty quantification in the aeroservoelastic simulation of wind turbines - Carlo Bottasso, TU Munich - Aerodynamics issues addressed in the EU proposal WindFusion - Carlos Simao Ferreira, TU Delft - Aeroelasticity in AVATAR: An overview on the results and conclusions with some reference to design - Spyros Voutsinas, NTUA 	IRPWind - Open data and data management	IRPWind WP5 - Mobility within EERA JP Wind
13.00	Lunch + poster			
14.00	<p>SP5 - Offshore wind energy</p> <p>Progress of offshore wind energy research, John Olav Tande, SINTEF</p> <p>Methodology for benchmark of offshore wind turbine models, Pawel Gancarski, CENER</p> <p>Case 1: floating turbine free decay test, Gordon Stewart, NTNU</p> <p>Case 2: fixed turbine eigen frequency evaluation, David Robert Verelst, DTU</p> <p>Wind farm models and control systems, Olimpo Anaya-Lara/Alexander Giles, University of Strathclyde</p> <p>Summing up, concluding remarks, final Q&A, moderated by John Olav Tande, SINTEF</p>	<p>SP8 - Cold Climate</p> <ul style="list-style-type: none"> - Cold Climate Sub Program introduction - Ville Lehtomäki, VTT - Weather modelling of icing - Neil Davis - SHM, fatigue and composites in CC - Tanja Griessmann, Forwind/UniHann - Low temperature testing in climate chamber - Pieter-Jan Jordaens, SIRRIS/OWI-Lab - Icing Wind Tunnel testing of sensors - Ville Lehtomäki, VTT - Industry workshop 	NSON Event	CL-Windcon event
16.30	Vera de Jong (ECN Policy Studies) - Escalated Conflicts caused by wind projects			
17.00	Bernard van Hemert (Ampyx) - Airborne wind energy system			
17.30	Drinks + poster			
18.15	Bus to dinner location			
19.00	Dinner Cruise			
22.00	Bus back to conference location			
22.30	Return to conference location			

26-Sep	Plenary hall 1	Plenary hall 2	Side events	
			Room 1 (1.06)	Room 2 (2.09)
9.00	Wilfried Breuer (Tennet) - Energy islands			
9.30	<p>SP3 - Structures and materials</p> <ul style="list-style-type: none"> - O&M after 2020 - Diego Allaix, TNO - The future of blade and subcomponent testing - Kim Branner, DTU - Coffee break - A strong foundation for future windturbines - Rasmus Eichstädt, Forwind - Generators for next-gen turbines - Henk Polinder, TU Delft 	<p>SP6 - Research facilities</p> <ul style="list-style-type: none"> - Introduction and session program presentation - Antonio Ugarte, CENER - Joint Experiments in numbers - Antonio Ugarte, CENER - IRPWind Joint Experiments: Progressing HVDC research - Paul McKeever, ORE Catapult - Ongoing activities - Open Science – Pawel Gancarski, CENER - Ongoing activities - EERA IP Showcase – the Technology Transfer Portal of IRPWind - Koen Hermans, ECN - Sweating the Assets: Utilising world-class test assets to underpin research activity – Chong Ng, Ore katapult - Achievements, due's & Beyond IRPWIND - activities and financing - Antonio Ugarte, CENER 	TWG Offshore Wind (closed meeting)	
12.00	Lunch + poster			
13.00	<p>SP1 - Wind conditions</p> <ul style="list-style-type: none"> - Update on subprogramme - Hans Ejsing Jørgensen or Jake Badger, DTU - The Perdigo experiment - Jose Palma, University of Porto - Measurement campaign and web portal - Kristin Gulbrandsen Frøysa, CMR AS - Low level jets over Fino 1 measurement and modelling - Björn Witha, Forwind OL - Taxonomy for Wind Energy, t.b.d. - Wrap-up - Hans Ejsing Jørgensen or Jake Badger, DTU 	<p>SP4 - Wind integration: grids</p> <ul style="list-style-type: none"> - Overview of SP activities - Kurt Rohrig, IWES - HVDC & Offshore - latest R&D results - Olimpo Anaya-Lara, UoS, Alev Akbulut, Fraunhofer IWES - System Service Provision through Optimal Control of Distributed WT's - Kaushik Das, DTU - Suitable overloading methods for FFC in MT-HVDC Grids - Nicolaos Cutululis, DTU - Forecasting, the latest results - Scott Otterson, Fraunhofer IWES, Bruno Schyska, ForWind - Market value of forecasts and bidding strategies - Hugo Algarvio LNEG - Economic offshore grid structures and robustness to uncertainties - Harald Svendsen, SINTEF - Summary, wrap up, next events - Kurt Rohrig, IWES 	Workshop 'Operation and Maintenance'	
15.30	Nenad Keseric (Statoil) - The Hywind Scotland project			
16.00	Stathis Koutoulakos (Nuon/Vattenfall) - The successes of the power curve working group (PCWG)			
16.30	Matthijs Soede (EC) - Closing of the conference			
17.00	End of programme			