

30 October 2017

Details to the IFA Wind Task 32

General Meeting 2017

Date: 9th and 10th November 2017 Venue: Hotel campus.guest, University of Stuttgart, 70569 Stuttgart, Germany

Introduction to IEA Wind Task 32

The main objective of the Task 32 is to identify and to mitigate barriers to the use of the lidar technology in wind energy applications such as site assessment, power performance, loads & control, and complex flow. An annual General Meeting is organized to provide international open platform for industrial and academic partners to exchange new ideas, experiences, and measurement techniques for lidar in wind energy.

More details can be found on the task website.

Meeting Concept

In 2017, several workshops have be organized to identify and mitigate barriers to the use of lidar for wind energy applications. Complementarily, the idea of the General Meeting is to provide a forum to build up a community and report from previous workshops and organize new ones.

The General Meeting 2017 will be a combination of presentations, discussion, and a poster / networking session:

- 1. Review of the 2017 workshops.
- 2. What's new in the world of wind lidar? Presentations from researchers and industry.
- 3. Let's talk! Poster / networking session addressing recent results.
- 4. Identifying and mitigating barriers in 2018: Proposals, discussions, and voting for new workshop topics for 2018.

Program Draft

Day 1

8:30 Arrival

9:00 Welcome/Introduction to IEA Wind Task 32 (David Schlipf) + Introduction Round

9:30 Review of 2017 events

Workshop #5 (Peter Clive, Woodgroup):
 Elaboration of use cases in wake and complex flow measurements

Results from Workshop #6 (Ioannis Antoniou, Siemens):
 Power Performance Measurement Using Nacelle Lidars

10:30 Coffee Break

• Results from Workshop #7 (Andrew Clifton, WindForS): Lidar Campaigns in Complex Terrain

Recommended Practices 18 on Floating Lidar Systems (Julia Gottschall, Fraunhofer IWES)

12:00 Lunch break

13:00 What's new in the world of wind lidar? Results of recent research projects

- UniTTe results Power performance testing in complex terrain using nacelle lidars (Antoine Borraccino, DTU)
- NREL's past, present, and future work on lidar-assisted control (Andrew Scholbrock, NREL)
- Full scale experiments of the NEWA project (Robert Menke, DTU; Norman Wildmann, DLR)
- The LiMeS project (Doron Callies, Fraunhofer IWES)

14:00 Results of recent advances in lidar technology

- Recent advances on Mitsubishi Electric's Wind lidar "DIABREZZA" (Shumpei Kameyama, Mitsubishi Electric Corporation)
- Recent advances on Leosphere's Lidars (Paul Mazoyer, Leosphere)
- Scaling the numbers and maintaining the quality: a challenge for lidar manufacturers (Carlo Alberto Ratti, ZephIR Lidar)
- Recent advances of Windar Photonics' LiDARS (Dominique Held, Windar)

15:00 Coffee Break

15:15 Results of recent commercial projects

- Reducing LiDAR Uncertainty Results and Ideas from Offshore Wind Accelerator Research (Michael Stephenson, Carbon Trust)
- Recent Field-Testing Results of Lidar-Assisted Control (Steffen Raach, sowento)

16:00 Let's talk!

Poster Session with beer reception (sponsored by sowento)

17:30 End of Day 1

19:00 Dinner (sponsored by SWE)

Day 2

9:00 Mitigating barriers in 2018

- Outlook Workshop #8: Certification of Lidar-Assisted Control Applications (David Schlipf)
- Presentation on suggested workshop concepts (Interested Workshop Leader)
- **9:45** Coffee Break
- **10:00** World Cafe: group discussions for the new workshops
- 11:00 Presentation of results of World Café (Moderators)
 - Voting for new workshop topics
- 12:00 Discussion on next phase of IEA Wind Task 32, Proposal for General Meeting 2018
- 12:30 Lunch break
- **13:00** End of meeting

Poster Session

The idea of the poster session is to facilitate networking and to give everyone the possibility to present work relevant for the community.

You are very welcome to present a poster with recent experiments, ongoing projects, and current research. Please bring your poster to the conference (we cannot print it or accept shipments). It could be new results or content already presented at another conference. The poster session is sponsored by <u>sowento</u>.

Workshop Proposals

On day 2 you will have the opportunity to present your suggestion for a workshop in 2018.

A proposal should be one slide including

- Which is the barrier which is addressed?
- What is the workshop concept? How does the workshop help to mitigate the barrier?
- Who might be a good workshop leader? Where and when could it take place?

The presentation should not exceed 3 minutes. Questions should be asked in the discussions afterwards.

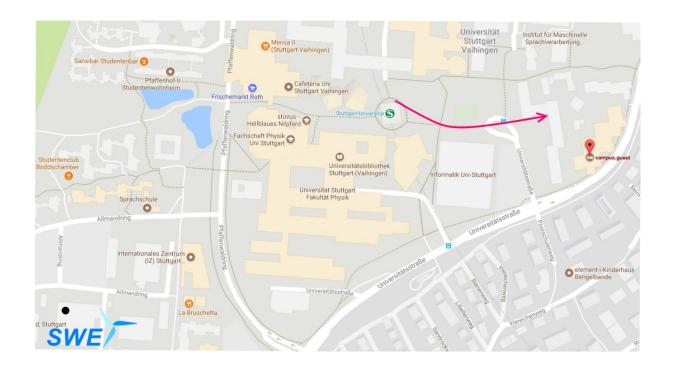
Workshop leaders will be supported by the Operating Agent. For catering, room etc. we have currently around 1000 € budget per workshop.

Venue Information

The General Meeting will be held on November 9 and 10 at the Hotel campus.guest, which is conveniently placed in 3 min walking distance from the local train station "Stuttgart Universität".

Hotel campus.guest (previously known as the "Hotel Commundo") Universitätsstraße 34 70569 Stuttgart Germany





Arrival by train

From Stuttgart main station, take the suburban railway lines S1 to Herrenberg, S2 to Vaihingen/Filderstadt or S3 to Vaihingen/Flughafen. Departure circa every 10 minutes, the journey time is about 10 minutes. Deboard at station "Universität", and take the exit Universitätszentrum. Further steps: Please check map and photo above.

Arrival by airplane

From Stuttgart airport, take the suburban railway lines S2 to Schorndorf or S3 to Backnang. Departure circa every 10-20 minutes, the journey time is about 16 minutes. Get out at station "Universität", and take the exit Universitätszentrum. Further steps: Please check map and photo above.

Arrival by car

Via motorways A8 from München or Karlsruhe, or A81 from Heilbronn or Singen drive until motorway junction Stuttgart. Then drive in direction "Stuttgart (Zentrum)" and leave the motorway at exit "Universität". At the traffic lights turn left. Pass the junction and stay on the Universitätsstraße and take the second turn right.

Participant List

Nama	Country	Institution
Name Alexander Passa	Cormany	Institution Fraugh of or IMES
Alexander Basse Andrew Clifton	Germany	Fraunhofer IWES Windfors
Andrew Clifton Andrew Scholbrock	Germany	
	USA	NREL DTIL Wind Engrav
Antoine Borraccino	Denmark	DTU Wind Energy
Antoine Larvol	Denmark	Windar photonics
Bastian Schmidt	Germany	DNV GL
Carlo Alberto Ratti	UK	ZephIR Lidar
Christos Tsouknidas	Denmark	Siemens
Cristoph Tiefgraber	Austria	energiewerkstatt
David Böckler	Germany	Enercon
David Schlipf	Germany	SWE University Stuttgart
Davide Trabucchi	Germany	University of Oldenburg
Detlef Stein	Germany	Multiversum
Dimitri Foussekis	Greece	CRES
Dominique Philipp Held	Denmark	Windar Photonics
Dong-Hun Ryu	South Korea	Korea Testing Laboratory
Doron Callies	Germany	Fraunhofer IWES
Florian Haizmann	Germany	SWE University Stuttgart
Guillaume Sabiron	France	IFP Energie Nouvelles
Holger Fürst	Germany	SWE University Stuttgart
Ines Würth	Germany	SWE University Stuttgart
Ioannis Antoniou	Denmark	Siemens
Jens Riechert	Germany	DNV GL
Julia Gottschall	Germany	Fraunhofer IWES
Julian Hieronimus	Germany	M.O.E. GmbH
Ko Jungmin	South Korea	Jeju Energy Corporation
Koh Seunghoon	South Korea	Jeju Energy Corporation
Lei Liu	China	Goldwind
Liliana Del Angel Bulos	Germany	Windtest Grevenbroich
Madalina Marilena Jogararu	Denmark	EMD International
Michael Stephenson	UK	Carbon Trust
Mingyuan Jiang	China	Goldwind
Mun-jong Kang	South Korea	Korean Register
Norman Wildmann	Germany	DLR
Oliver Bischoff	Germany	SWE University Stuttgart
Paul Mazoyer	France	Leosphere
Peter Clive	UK	SgurrEnergy
Rebeca Rivera Lamata	Denmark	DONG Energy
Rob K. Newsom	USA	PNNL
Robert Menke	Denmark	DTU Wind Energy
Sara Koller	Switzerland	Meteotest
Shumpei Kameyama	Japan	Mitsubishi Electric Corporation
Simon-Philippe Breton	Canada	TechnoCentre Éolien
Stefan Goossens	Netherlands	Vattenfall
Steffen Raach	Germany	SWE University Stuttgart
Tim Hagemann	Germany	SWE University Stuttgart
Tobias Klaas	Germany	Fraunhofer IWES
Wang Bin	China	Goldwind
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