

# Earn a PhD while working in the wind energy industry

## Apply to a new wind energy PhD program in France and Germany

Atmospheric Physics and Turbulence for Wind Energy, or **AptWind** is a new, European Industrial Doctoral Network, running from September 2023 to August 2027. The aim of AptWind is to train the next generation of experts in atmospheric physics for wind energy applications, with particular focus on technology transfer from academia to industry. The PhD topics for the 15 candidates cover engineering domains critical to wind energy, including computational fluid dynamics, lidar measurements, and turbine load simulations. Candidates will split time between a university in one country and a private-sector company in another country. AptWind is funded by Horizon Europe through grant number 101119550. See <http://www.aptwind.eu> for more information.

The program includes regular, specialized seminars, such as Trustworthy Artificial Intelligence for Environmental Systems Science at NCAR in Boulder, Colorado in 2024, and Remote Sensing for Wind Energy PhD Summer School at the Danish Technical University in Denmark in 2025. PhD candidates will have regular meetings with the entire student and supervisory network at sites around Europe to present progress, discuss challenges, and to learn from the AptWind community.

Within the AptWind program, the candidates will gain a portfolio of transferable skills, contribute to breaking major barriers for the green energy transition via their research, and develop a broad professional network in the wind energy industry.

The specific PhD research topic announced here focuses on developing **lidar technologies to map and understand the marine boundary-layer (MBL) and its influence on offshore wind farm behavior**. The MBL poses new challenges for the next generation of large wind turbines due to potentially abrupt shifts in wind speed and wind direction, as well as modulation of turbine-atmosphere interactions due to diverse physical characteristics of the boundary layer. As a principal researcher, you will have access to WindCube scanning lidars for algorithm and control system development. Your new techniques will be demonstrated in offshore field measurement campaigns. In addition to these lidar field campaigns, you will have the opportunity to carry out research on a scientific research cruise along with a team of geosciences researchers.

You will spend the first 18 months at [Vaisala France](https://www.vaisala.com/en/careers/10-reasons-join-vaisala), the industry partner. Vaisala France is the manufacturer of the WindCube® lidar product family, the most widely used wind lidar in the world. Learn more about working at Vaisala: <https://www.vaisala.com/en/careers/10-reasons-join-vaisala>. The academic institute, where you will spend the second 18 months, is the [Fraunhofer Institute of Wind Energy Systems](https://www.iwes.fraunhofer.de/en/jobs---career.html) in Germany. FIWES carries out applied research and development for wind energy, including internationally unique testing infrastructure, and extensive methods expertise in the fields of the reliability and validation of wind turbines. Learn more about working at Fraunhofer: <https://www.iwes.fraunhofer.de/en/jobs---career.html>. You will be compensated following appropriate local rates for PhD researchers.

## The requirements for this PhD position are:

- Completed masters-level degree in a physical sciences or engineering field by Fall 2023
- Grades: 3.0 out of 4.0 scale or higher (or equivalent)
- Proficiency with scientific programming languages such as Python, Matlab, or R
- English language-level B2 or above

For participation in the program, you must not have been awarded a title of PhD. Furthermore, you must not have carried out work in France for more than 12 months during the last 3 years. Please read the eligibility criteria at [www.aptwind.eu/eligibility](http://www.aptwind.eu/eligibility) carefully. We will not be able to employ you if you do not fulfill the criteria.

## To apply for this position, please send:

- Curriculum Vitae
- Academic transcript
- Statement of purpose

to Andrew Hastings Black ([andrew.hastingsblack@vaisala.com](mailto:andrew.hastingsblack@vaisala.com)) before the **deadline of 5 November 2023**.

The application process follows the EURAXESS Code of Conduct for Recruitment and will include diverse methods to understand candidates' strengths and experiences. Assistance with relocation and settling into the two new countries and research environments will be provided by AptWind, FIWES, and Vaisala.

windcubelidar.com

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