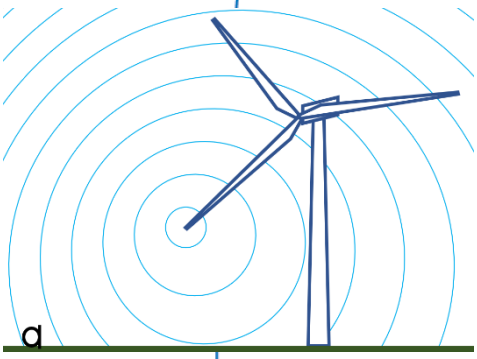
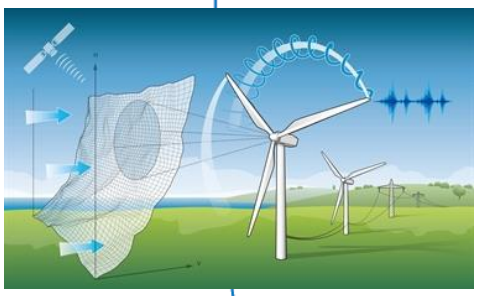
Sound sources on wind turbines

Master thesis projects or internship at DLR engine acoustics, Berlin, Germany



Microphone measurements of wind turbine noise



Schematic of the DLR Research Wind Farm

The department of engine acoustics at the DLR Institute of Propulsion Technology looks for students who are interested in the analysis of experiments on wind turbine noise. The task is to go out with a team of DLR and perform field measurements with microphone arrays at the Research Wind Farm of DLR in Krummendeich, Germany.
The data will be analyzed to locate and track the moving sources on the blades in the rotating frame of reference and also the stationary sources on the hub and the mast. For the rotating sources, existing analysis methods and Python codes need to be adapted and applied to the conditions at the wind turbines that we consider. Contributions in the infrasound spectrum will also be analyzed with a focus on the angle of arrival of the sound waves relative to an array of microphones on the ground.

Financial support for interns from foreign universities can be paid according to the rates set by IAESTE (International Association for the Exchange of Students for Technical Experience), which currently is at about 861 € per month. Master thesis projects can be supported as well by student assistant jobs.

Prerequisites for these topics are a good background in signal processing and technical acoustics as well as programming experience, preferably in Python 3.

Interested? Contact Dr.-Ing. Henri Siller
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