

## **CFD modelling and simulation of 5-hole pressure probe for small wind turbine**

In this project you will work beside other members of the student competition team for small wind turbine, and learn basics of wind turbine design, wind energy, and work on the modelling and simulation of a 5-hole pressure probe using CFD software. Multi-hole pressure probes are used in flow measurements to measure the flow speed and direction. The goal of this project is to simulate the performance and calibration of a pressure probe in different flow conditions. This project will lead to a measurement sensor for wind turbine controller design projects for a more efficient machine.

Main tasks/requirements:

- CFD modelling and simulations using Simcenter StarCCM+, OpenFoam or equivalent
- Preparation of the report of your work explaining the approach, solutions, and discussions on results
- Contribution to the final report of the team for the competition
- Contribution in preparation of the wind turbine
- Participation in weekly team meetings
- Teamwork and communication with other team members (online for remote students)
- Intermediate English knowledge or above

For more information about our team, visit the page:

<https://www.hs-emden-leer.de/studierende/fachbereiche/technik/projekte/wind-challenge>

Contact person for application or more information:

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