

Aerodynamic modelling of scaled-down 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 together to define the parameters and properties of a scale model of current wind turbine using the open-source code "Qblade". The main goal is to simulate and analyse the performance of small- scaled wind turbine and determine the necessary characteristics to have the similarities with the real-size turbine. This will lead to determination of a model, which can be used in wind tunnel validating experiments.

Main tasks/requirements:

- Learning about the current model and aeroelastic similarity rules
- Modelling and simulation of scaled turbine in "Qblade" code
- Preparation of the report of your work explaining the approach and discussion on the results
- Teamwork and communication with other team members
- Contribution to the final report of the team for the competition
- Contribution/help in design of the scaled model for the wind tunnel experiments
- Participation in weekly team meetings (online for remote students)
- Intermediate English knowledge or above

For more information on 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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