The Chair for Wind Power Drives researches the behaviour of drive systems in modern multi-megawatt wind turbines. Research goals include increasing the availability, robustness and energy efficiency of wind turbines and reducing power generation costs. For this purpose, simulation tools and modern system test benches are used in combination.

In the ReStroK research project, the normal condition of wind turbines is determined on the basis of operational data. The normal state is continuously compared with the current operating data in order to determine deviations. After a root cause analysis, actions are derived to establish the normal condition with the aim of making optimum use of the potential of the wind turbine and thereby reducing electricity generation costs.

As a decision basis for the selection of the corrective actions, a generic FMEA is to be prepared within the scope of this work, which takes into account all wind turbine concepts considered in the ReStroK project.

Master’s thesis
Failure Mode and Effects Analysis (FMEA) for wind turbines (WT)

Tasks:
- Generation of a reference product structure
- Creation of a modular product architecture
- Analysis of potential error chains
- Definition of evaluation matrices
- Identification of prevention and detection actions

Prerequisites:
- Strong analytical skills
- Motivation to work independently and autonomously
- Interest in dealing with interdisciplinary problems
- Communication and team skills, as well as a good command of the English language
- Previous knowledge of FMEA and WT is desirable, but not a prerequisite

We offer:
- Scientific work in a highly motivated, interdisciplinary team
- Contact to industry and cooperation with other research institutes
- Intense supervision
- Start: Immediately or by arrangement

If you are interested please contact:
Dipl.-Ing. Daniel van Issum
R202
Tel. 0241 80-90 879
daniel.vanissum@cwd.rwth-aachen.de