Currently, doubly-fed induction generators (DFIG) are widely used for wind turbines. The main advantage of the DFIG compared to the other adjustable speed generators is the fact that power electronics components need to handle only about one third of the generator power. Harmonics are produced by the converter switching; this creates losses and noise in the machine and may also create mechanical unbalance, in order to eliminate these harmonics, a good designed filter is needed.

Filter Design including the following functions:

- Literature survey about filter types and decide the most proper one for our project.
- Selection of components taking into account the Current Distortion Limits.
- Build the filter “hardware”.
- Testing by using the grid side converter.
- Comparison between the proposed filter and the conventional one.
Notes:
- This work is for master student.
- This work is a hardware in addition to software using Matlab/Simulink.
- Contacting with me will be in English language, but it is your choice to write your thesis in English or German.
- Do not hesitate to ask me if you need more details.

Requirements:
- Good knowledge in electric drives.
- Good knowledge in Matlab/Simulink.
- Knowledge in power electronics and control.