Lifetime prediction methodologies are an essential tool during design of wind turbine rotor blades. A detailed knowledge about their basics and special features is important to evaluate the results. Even for similar physical models, the results can show decisive differences.

**Objective**

To quantify the influence of each step within a lifetime prediction process on the results during a benchmark

**Benchmark**

- Comparison of different rainflow counting algorithms
- Comparison of different S-N curve formulations
- Comparison of different constant-life diagrams

Lifetime calculation with linear Palmgren-Miner rule