

## Propositions

accompanying the thesis

Fatigue analysis of wind turbine blade materials using a continuum damage mechanics framework

Jaykarna Ashok Bhangale

1. *In the study of physics, synchronization between theory and observations is more important than either one individually.*  
*After PW Bridgeman "Observation was more important than theory in the study of physics"*
2. *Modifying an existing generic approach helps product design more than finding a product-specific method.*
3. *To obtain good quality results, time planning of a fatigue test is equally important to that of its execution.*  
*"This proposition pertains to this dissertation."*
4. *For constructing theory and mathematical formulation, a selection of scale depends on the balance between product scale and required understanding.*
5. *The first law of thermodynamic applies to all human beings. However, the second law applies only to successful human beings, because in them, the energy consumed for life processes is more than inertia energy.*
6. *Machine learning makes both fundamental and applied research in solid mechanics faster than the current practice adopted in this thesis.*  
*"This proposition pertains to this dissertation."*
7. *Both astrology and CDM framework requires all influencing variables to predict the future.*  
*"This proposition pertains to this dissertation."*
8. *In any research, the ratio of time required to formulate question over the answer is proportional to the ratio of precision obtained in question over the answer.*
9. *The fourth law of robotics: In any circumstance, human(s) should not use a machine(s) such that the use results in lowering of human consciousness.*
10. *Under fatigue, both human emotions and material damage develop over time in a non-linear way.*  
*"This proposition pertains to this dissertation."*

*These propositions are regarded as opposable and defensible, and have been approved as such by the promoters Dr.ir. R.C. Alderliesten and Prof.dr.ir. R. Benedictus.*