

Interactive comment on “Development of new strategies for optimized structural monitoring of wind farms: description of the experimental field” by João Pacheco et al.

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Received and published: 5 May 2020

I will specify my general comments below. Please find my detail comments (line-specific) in the pdf attached.

The authors present their experimental field for structural monitoring of onshore wind turbines. They introduce sensor setups and first results on modal parameters. The topic has high relevance for the wind industry due to aging fleet of assets.

The paper is clearly written, the content is sound and well presented.

Introduction misses a review on state-of-art and existing literature. What is the research

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gap you wish to fill?

Presented results are clearly, however, I miss novelty here. Furthermore, I wish there would be critical discussion in the paper. For example, interesting questions would be: * Why is the specific instrumentation chosen? * How are number and positions of sensors chosen, e.g. sensitivity study of desired results to sensor placement? * How do you deal with measurement noise and varying operational conditions? * How do you clear and pre-process data? In addition the following is missing or must be adapted: * Results on the comparison between bending moments obtained from strain gauges and clinometers shall be presented. * A feedback from results of blade monitoring to tower monitoring. Can you now explain some more of the excitation frequencies? * Blade results are presented although the calibration is not completed. Please finish first the calibration, then present results.

I do not understand why the results from FAST are presented. There are not enough details given to understand what was done in FAST, nor what it tells us. I suggest to either extend these results massively or to leave it out completely.

To conclude, I believe the study in general is beneficial for the scientific community. I expect the authors to use this as an initial paper with follow-ups with more technical content later on. Nevertheless, the authors shall add some novelty to this paper, such as suggested above, to justify a journal paper.

Please also note the supplement to this comment:

<https://www.wind-energ-sci-discuss.net/wes-2020-45/wes-2020-45-RC2-supplement.pdf>

Interactive comment on Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2020-45>, 2020.

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