

Second review of the manuscript:

Vlastos, D., Tzimi, N., Trampa, G., Riziotis, V., Manolas, D., and Spyropoulos, N.:

“Calibration and validation of an engineering model for vortex induced vibration prediction in wind turbine towers”

General comments:

My previous comments have been satisfactorily addressed, and the presentation of the results has improved considerably. Still, there are a few improvements that I believe should be considered by the authors before publication.

Technical corrections:

Please follow the journal’s guidelines for in-text citations:

“If the author's name is part of the sentence structure only the year is put in parentheses ("As we can see in the work of Smith (2009) the precipitation has increased"). If the author's name is not part of the sentence, name and year are put in parentheses ("Precipitation increase was observed (Smith, 2009)").”

<https://www.wind-energy-science.net/submission.html#references>

Section: Introduction

- line 69: The sentence “in quadrature with the motion velocity” should be “in phase with the motion velocity” or “in quadrature with the structural motion”, shouldn’t it?

Section: Methodology

- line 142: Inconsistent use of italics for mathematical symbol y .
- Eqn 5: Inconsistent use of italics between this equation and the rest.
- line 189: (Farshidianfar and Dolatabadi, 2013) is cited, but there the reference is not present in the References section.
- Fig. 2: Please add sub-captions. Substitute Str with St , and add Sc . Use the appropriate sub-captions when referring to the figure in the body text. Extend the caption so the figure is self-contained (everything on the figure should be presented).
- Fig. 3:
 - In panel (b), the same line style is used for both trend lines, making it ambiguous and harder to interpret.
 - The Magnus et al. (2013) reference seems quite obscure to me. Is there a specific reason for it to be included? Could you find better or additional references for this

model? Motivate the inclusion of this specific model, find a better reference for it (preferably in English) or just remove it.

- Please make the contribution of this Figure to the overall discussion of the manuscript more clear in the body text. How does this motivate or relate to the modified Hartlen-Currie model? Maybe you could anticipate that the trend lines will be employed for the model curve-fitting later on.
- line 265: I think that you refer to the experimental results of the amplitude as a function of the reduced velocity before presenting them. This may confuse the reader. Please rephrase.
- Fig. 5: Swap the legend order for consistency with Figure 4. Use different line styles for each Scruton number.
- Fig. 6: Present the results from your models for more reduced velocities (at least as many as there are experimental points), to show smoother lines.
- line 361: “(see the Appendix)” – specify which Appendix.

Section: VIV predictions on a cantilever cylinder

- Fig. 9:
- More data points with your model are required (at least as many as there are experimental points).
 - Why does the result in Fig. 9(b) corresponding to “beam – Parameter range: 4.5 - 10” drop to zero (after U_{max}) at lower velocities than for the other parameter ranges?
- Thanks for adding the Blevins and Eurocode models to Figure 10. But please comment accordingly.

Section: Appendix C: Eurocode model – Approach 1

- Table C1: I believe $y_{\{max,j\}}$ should be divided by D in both instances it appears in the table. Edit or justify.