

Wind Energ. Sci. Discuss., author comment AC1  
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## Reply on CC1

Iñaki Sandua-Fernández et al.

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Author comment on "Platform yaw drift in upwind floating wind turbines with single-point-mooring system and its mitigation by individual pitch control" by Iñaki Sandua-Fernández et al., Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2022-86-AC1>, 2022

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Dear Christian,

Thanks for your comments. they are highly appreciated and welcomed.

For the purpose of this research, all your comments are indeed taken into account, and even more.

On the one hand, BEM is no longer acceptable for, let's say, more than 15°. For that reason, we have used our own aerodynamic model AEROVIEW, which is a Lifting Line code which overcomes the limitations coming from BEM models. If you want to have more details about this code, you can check it at the references:

Martín-San-Román, R., Azcona-Armendáriz, J., and Cuerva-Tejero, A.: Lifting line free wake vortex filament method for the evaluation of floating offshore wind turbines. First step: validation for fixed wind turbines, in: IWOTC, ASME 2019 2nd International Offshore Wind Technical Conference, St. Julian's, Malta, <https://doi.org/https://doi.org/10.1115/IOWTC2019-7540>, 2019.

Martín-San-Román, R., Benito-Cia, P., Azcona-Armendáriz, J., and Cuerva-Tejero, A.: Validation of a free vortex filament wake module for the integrated simulation of multi-rotor wind turbines, *Renewable Energy*, 179, 1706–1718, <https://doi.org/https://doi.org/10.1016/j.renene.2021.07.147>, 2021.

In any case, it is important also to highlight that with our control approach, the problem of limitations of BEM models is reduced, if not cancelled, since we are now able to control yaw misalignment under an acceptable range, decreasing loads and improving or making possible a good performance of this kind of floating platforms.

On the other hand, hydrodynamic models in OpenFAST suffer of a similar limitations for the analysis of this kind of drifts. So we have also checked this with high fidelity models on CFD for the hydrodynamics coupled with OpenFAST. A paper with more details is coming soon.

Willing to have the chance to further comments and share experiences with you

Iñaki