



Corrigendum to “Trailed vorticity modeling for aeroelastic wind turbine simulations in standstill” published in Wind Energ. Sci., 2, 521–532, 2017

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The paragraph that includes Eq. (8) should read as follows.

To ensure that the model can be used for straight vortices in standstill conditions and helical vortices in normal operation, a new Φ^* is computed. It is a linear interpolation between Φ_s for straight vortices, Eq. (7), and Wang and Coton's expression for circular vortices (Wang and Coton, 2001). The root correction described in Pirrung et al. (2016) is included in the variable Φ_C for circular vortices.

$$\Phi^* = k_\phi \Phi_s + (1 - k_\phi) \Phi_C, \quad (8)$$

where the interpolation k_ϕ is a function of both h/r and the tangent of the helix angle. The straight and circular Φ approach each other for $h/r \rightarrow 0$, meaning for sections very close to vortex trailing points, where the influence of the vortex is large and an accurate computation of Φ is thus very important. Therefore, the interpolation proposed in Eq. (8) ensures good results for close positions, which would be difficult to achieve by direct curve fitting of Φ to the optimal value according to Eq. (6).

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References

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