

Accepted Manuscript

Numerical simulation of a vertical axis wind turbine airfoil experiencing dynamic stall at high Reynolds numbers

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PII: S0045-7930(17)30071-3
DOI: [10.1016/j.compfluid.2017.02.021](https://doi.org/10.1016/j.compfluid.2017.02.021)
Reference: CAF 3410



To appear in: *Computers and Fluids*

Received date: 3 June 2016
Revised date: 21 February 2017
Accepted date: 28 February 2017

Please cite this article as: Brian Hand, Ger Kelly, Andrew Cashman, Numerical simulation of a vertical axis wind turbine airfoil experiencing dynamic stall at high Reynolds numbers, *Computers and Fluids* (2017), doi: [10.1016/j.compfluid.2017.02.021](https://doi.org/10.1016/j.compfluid.2017.02.021)

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Highlights

- Dynamic stall simulation of a VAWT NACA0018 airfoil during Darrieus pitching motion.
- Quantitative comparison of CFD modeling methods with experimental data.
- Dynamic stall vortices develop and are shed from the airfoil trailing edge region.
- Increasing the Reynolds number delays dynamic stall to greater angles of attack.

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