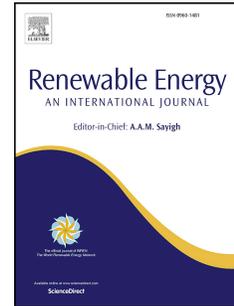


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Uncertainty modeling in reliability analysis of floating wind turbine support structures

Salem Okpokparoro, Srinivas Sriramula



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Salem Okpokparoro: Methodology, Software, Validation, Investigation, Writing- Original draft preparation, Funding.

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Uncertainty modeling in reliability analysis of floating wind turbine support structures

Salem Okpokparoro^{a, b} and Srinivas Sriramula^{a*}

^a School of Engineering, University of Aberdeen, Aberdeen, AB24 3UE, United Kingdom

^b Petroleum Technology Development Fund (PTDF), 2 Memorial Close, Central Business District, Abuja, Nigeria

* Corresponding author: s.sriramula@abdn.ac.uk

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Highlights:

- A novel reliability framework to understand the reliability of FWTs is proposed.
- The influence of nonlinear behaviour of coupled FWT is efficiently captured.
- Computationally efficient surrogate models are developed for failure functions.
- Kriging uncertainty is evaluated and implemented for improved reliability estimates.
- The proposed approach is one of the initial steps towards optimally designed FWTs.

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Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

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