

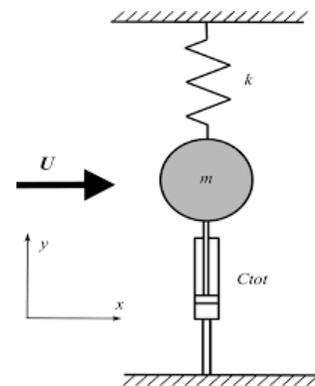
Who we are

Siemens Wind Power is a technology leader in offshore wind. Its office in The Hague is the global centre of competence for all of its offshore wind farm projects. We specialize in a deep technical understanding of the offshore environment and continuously seek to expand our load and design capabilities. We are a team of 50 engineers and research students collaborating with departments all over the globe and most specifically with our headquarters in Denmark.

Master Thesis Assignment

"Investigation, modeling and verification of critical parameters driving vortex induced vibrations on wind turbine towers"

Present day wind turbines endure a variety of temporary load scenarios before installation and operation. For different stages of its product life (e.g. port staging, sea transport, installation and commissioning), the tower is exposed to environmental conditions involving a range of natural frequencies. This brings the towers (standalone or grouped) at risk of frequency lock-in due to vortex induced vibrations, which can detrimentally impact the design lifetime of the support structures. With the development of future turbines resulting in taller slender support structures, a deeper insight into the phenomenon of vortex induced vibrations is required to develop more efficient mitigation strategies.



The main research questions which require investigation

- How conical sections and wind shear effect the onset of VIV
- Impact of arrangement and inflow angles for grouped towers
- Duration of vortex shedding induced lock-in for a given critical wind speed.

Requirements

We are looking for a candidate with a background in aerospace/mechanical engineering with a strong affinity for fluid mechanics and structural dynamics. Capabilities with numerical flow modelling would be beneficial along with a proficiency in programming using Matlab. It is required from the candidate to be fluent in English and have the ability to self-start as well as work within a team

What we offer

A challenging, fun and multicultural work environment to conduct your Master thesis. Collaboration with state of the art technology centers across Siemens; aiming to develop and create strong competences in the offshore wind industry. We capture the entire value chain in the offshore environment from sales to project commissioning within our office.

- Competitive compensation package
- Approximately 9 months duration

Contact information

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