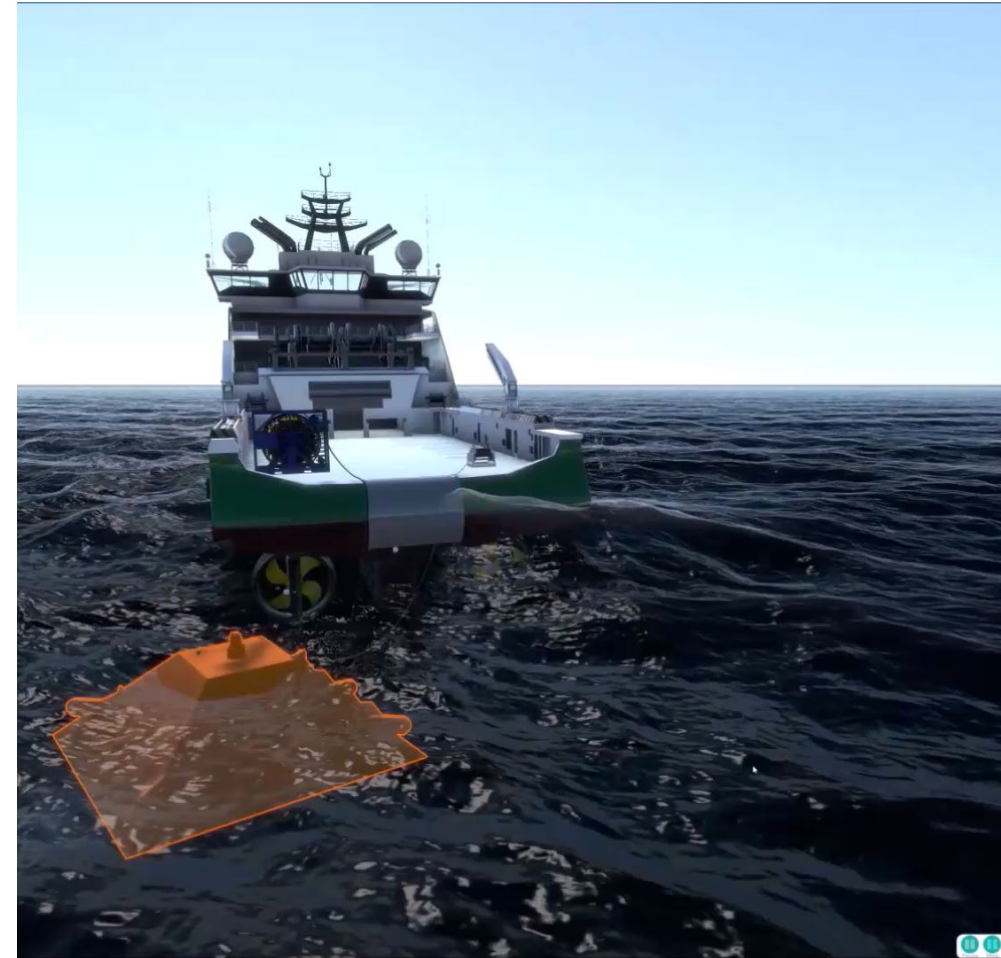


Cost Effective Methods of Installing Offshore Wind Infrastructure

Dr Marcin Kapitaniak
Prof Richard Neilson
Dr Rodrigo Martinez
Dr Sergi Arnau

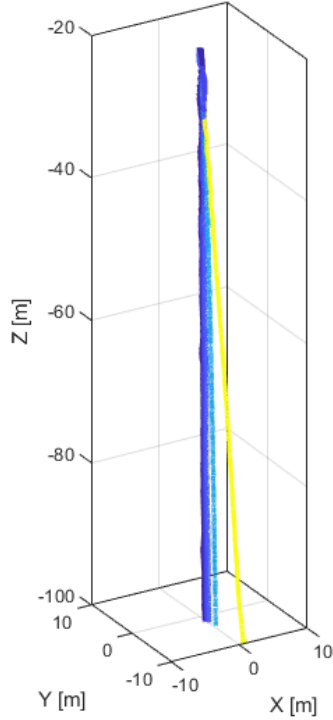
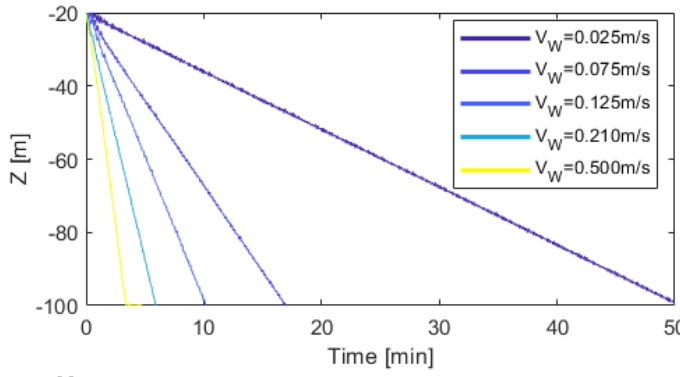
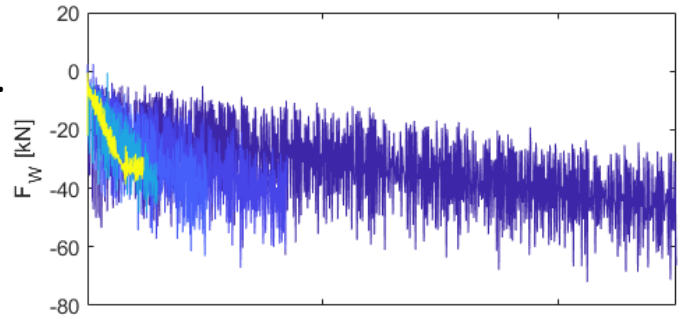
Anchor installations

- Motivation:
 - To simplify the installation and reduce costs of floating offshore wind turbines.
- Proposed solution:
 - Liquid Anchor technology, that delivers improved anchor holding capacity and thereby reduced installation costs.
 - A variable buoyancy anchor towed and installed from smaller vessel without the need of heavy lift equipment.
 - Virtual field trials ahead of offshore deployments through multi-physics simulations under controlled multi-variables conditions: waves, currents, wind, drag & lift forces and more.



Parametric studies

$H_S=1\text{m}$
 $T_p=10\text{s}$



Red markers ● indicate the orientation range of the anchor at $V_W=0.35\text{m/s}$, the winch speed at which the anchor descends the fastest while still being controlled by the winch.

