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## **Optimization of low-height lifting system for installation of offshore wind turbines (OWT) by using floating vessel**

- Supervisor: Karl Henning Halse (NTNU)
- Co-Supervisor: Bernt Johan Leira (NTNU)

### **Research topics:**

- Hydro-aero-dynamic response prediction of the installation system
- Prediction of extreme response for the installation and estimation of the reliability of the system
- Optimization of the installation concept and prescription of the response-based criteria

### **Industrial goals:**

- Provide new and accurate response estimation model for installation of offshore wind turbines
- Contribute to the development of the response-based criteria and improved regulations

### **Scientific questions:**

- How to improve the design concept of this low-height lifting system while ensure both economy and safety;
- How to enhance the numerical models to provide a more realistic prediction for the dynamic responses of the installation system.

### **Innovations:**

- Novel methods for OWT installation leading to cost-reducing as well as improved safety and operability.

### **Cooperating companies:**

- SINTEF Ocean