

**Title:**           **Cooperative Control Applied to Multi-Vessel DP Operations - Numerical and Experimental Analysis**

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**Abstract**

Offshore operations involving several floating units are becoming more frequent nowadays. Such operations are used for subsea equipment installation for example. This kind of operation requires a high level of coordination between the vessels, which today is made without the ship's information exchange, being that each ship is individually commanded. Therefore, in those cases, a cooperative control could be applied ensuring that the relative distance between the ships are maintained in a limited range, controlling operational parameters such as the lifting line traction. The benefits of this control are shown when compared to the non cooperative control by means of an experimental set-up with two DP vessels and numerical simulations.

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