

Abstract 039 – D-ICE Engineering

From: sofien.kerkeni@dice-engineering.com

First Name: Sofien
Last Name: Kerkeni
Presenter (if different):
Other Authors: Francois Rongère, Camille Chauvigné, Lucas Letournel
Company: D-ICE Engineering
Address: 1 Rue de la Noe
Address Continued:
City: Nantes
State/Province: Pays de la Loire
Postal Code: 44300
Country: France
Email: sofien.kerkeni@dice-engineering.com
Telephone: +33240375325
Fax:

Presentation Title: A novel & Innovative Open-Source framework for the Design of Challenging DP Operations - Applications & Perspectives

Abstract:

This paper is a result of the significant R&D program launched by D-ICE Engineering and a part of the O3 research project sponsored by Total and Naval Group. The main objectives of these programs are to provide the marine industry with modern, up to date tools and methods. It aims to adress the challenges faced by the Offshore Industry. The items covered here are multiple ; investigation of OPEX optimization, optimization of operation design and real-time monitoring of the performances. Numerical modelling and simulation tools are central for such analyzes. A novel Python/C++ based framework for time domain simulation jointly developped by the laboratory of Hydrodynamics of Centrale Nantes (LHEEA, France) was the base of the study. This framework built with modern and industrial standards integrates all required features for modelling complex setups including waves, cables, anchors, propellers and Dynamic Positioning. This papers shows the capabilities of FRyDoM, a strong candidate for standardization of tools required by the DP industry.