**INTRODUCTION TO ANALYSES FOR OFFSHORE BOTTOM FOUNDED STRUCTURES**

**ABSTRACT**

The seminar focuses on the design offshore structures for the oil & gas as well as for the wind energy markets and focuses on various aspects including the assumptions to set problem boundaries, the laws and formulations that better describe the phenomena and software packages employed to achieve solutions. The presented approaches have been successfully adopted in the European countries having large offshore experiences, like the UK and the Netherlands. In the first part a comprehensive description of the following construction and design aspects: i) lifting; ii) in-place; iii) in-bottom; iv) fatigue; v) wave slam; vi) vortex induced vibration vii) transportation; viii) corrosion protection ix) weight control x) ship impact, will be given. In the second part a case study is presented and discussed.

At the end of the seminar, attendees should have a developed a better understanding on the specific design challenges of this discipline.

**SPEAKERS’ CV**

*Felipe Moreno MSc*

Felipe is an offshore structural engineer with several years of experience in the foundation and support structure design.

He achieved his MSc degree in Civil Engineering at Polytechnic University of Madrid. There he learned about the principles that are used in sound design engineering and gained some practice with modelling tools.

After few years of experience, he decided to go for a new challenge and joined Delft University of Technology to pursue a MSc in Offshore Engineering. There he earned the particular knowledge and skills for the oil&gas and renewable sectors.

He has worked overseas in different projects related to the offshore world, in particular in the Gulf of Mexico and the North Sea.

Recently he joined a jacket consultant in London as a structural engineer. He is interested in spreading technical knowlege among professional and university students around the latin world.

*Luca Montalti PhD*

Luca is an offshore structural engineer with a strong background in numerical modelling and geotechnical engineering.

He achieved his bachelor degree in Civil Engineering at University of Bologna. His final project focused on the problematics and key aspects of the unsaturated soil mechanics.

He undertook the MSc degree in Structural Engineering at University of Bologna. His master thesis was in collaboration with Mott MacDonald Group focusing on modelling the heave of large excavations in clay.

He won a Ph.D. scholarship at University of Southampton. The title of his doctorate is: ‘3D modelling of bored pile installation effects and long term monitoring of a propped retaining wall’.

He worked in London as a Geotechnical/Structural engineer and 3D/2D Flac expert. He moved to the offshore field where he initially was involved in the Greater Ekofisk Modifications Contract (GEMC). At this moment, he is a designer of fixed offshore structures for the oil&gas and renewable markets.