CHAKKALAKKAL JOSEPH Jose Mishael

PhD Candidate at University of Liège

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Keywords: Offshore wind turbine, Corrosion, Fatigue, Structural reliability, Dynamic Cables, Structural Optimisation

MISSION

MAXWind Project

MAXWind (MAintenance, Inspection and EXploitation Optimization of Offshore Wind Farms subjected to Corrosion-Fatigue) project aims to develop offshore wind turbine lifetime assessment tools that can help offshore wind farm owners and operators to optimize the wind farm in the future to reduce the Levelized Cost of Energy (LCoE) below 60€/MWh. The project is funded by Energy Transition Fund (ETF), Belgium.

HOLISHIP Project

HOLISHIP (HOLIstic optimisation of SHIP design and operation for life-cycle) focuses on developing innovative holistic design optimisation methods for European maritime industry. The project is funded by European Research Council.

EDUCATIONAL BACKGROUND

Ph.D. Candidate

University of Liège

March 2019 - Present

Area of Research: Ship structural optimisation, Structural Health Monitoring, Offshore wind turbine Foundation, Corrosion-Fatigue, Dynamic Cables

Erasmus Mundus Master in Integrated Advanced Ship Design (EMSHIP)

University of Liège & École Centrale de Nantes

Sept 2017 - Feb 2019

Joint Master Degree:

- Master in Naval Architecture (University of Liège, Belgium)
- Master in Hydrodynamics, Energy and Propulsion (École Centrale de Nantes, France)
- Complementary Diploma in Offshore Structures (West Pomeranian University of Technology, Szczecin, Poland)

Thesis title: “Structural Optimisation of Midship Region for Ro-Pax vessel in Early Design Stage using FEA”

Master of Technology in Computer Aided Structural Analysis and Design

Cochin University of Science and Technology, India

Jul 2012 – Apr 2014

Thesis title: “Design and Structural Analysis of Mounded LPG Bullets”

Bachelor of Technology in Mechanical Engineering

Cochin University of Science and Technology, India

August 2007 – Apr 2011

Thesis title: “Design of Solar Air Conditioner based on vapour absorption system”

PUBLICATIONS

Journals

- Bayatfar. A, Mishael. J, Warnotte. R and Rigo. P, An Integrated Framework for Ship Structural Optimisation in Contract Design Phase, Annals of “Dunarea de Jos” University of Galati Fascicle XI - Shipbuilding, December, 2019. https://orbi.uliege.be/handle/2268/242031

Others

- Bayatfar. A, Mishael. J, et al., Deliverable D4.3-Structural and Functional Optimisation Packages for Platform 12, Holistic Optimisation of Ship Design and Operation for Life Cycle, Horizon 2020 – 689074, August, 2019. https://orbi.uliege.be/handle/2268/247117

WORK EXPERIENCE

Research Intern

University of Liege, Belgium

Jun 2018 – Oct 2018

Development of an automated platform for structural optimisation of Ro-Pax vessel.

Lecturer

Department of Ship Technology, Cochin University of Science and Technology, India

May 2014 - Nov 2015

Teaching subjects viz. strength of materials, fluid mechanics and dynamics of structures.

SKILLS

Languages

English (Fluent), French (Basic) and Malayalam (Mother Tongue).

Computer skills

Computed Aided Design, Finite Element Analysis, Optimisation, Programing (C++, MATLAB and Python)