AMR HEGAZY

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EDUCATION

Ecole Centrale de Nantes, Nantes, France

MSc. in Marine Renewable Energy Systems (Double Degree) (http://master-rem.eu/)

- Erasmus Mundus Joint Master's Degree "Renewable Energy in the Marine Environment", organised by three universities:
- University of Strathclyde, Glasgow, UK (First semester)
- University of the Basque Country, Bilbao, Spain (Second semester)
- Ecole Centrale de Nantes, Nantes, France (Second year)

Alexandria University, Alexandria, Egypt

Bachelor of Science in Mechanical Engineering

Overall Grade: First class honours degree (88.51%, ranked 10th in a 500-student class).

Dissertation Project: Design and Manufacture a solar-powered adsorption chiller for cooling and water desalination system purposes.

EXPERIENCE

LHEEA, Nantes, France

Working on my master thesis about "Dynamics of wind turbines far-wakes and its correlation with the incoming atmospheric turbulence" to investigate the link between the upstream flow and the wakes downstream to increase power production and reduce fatigue problems

Intern, Scottish and Southern Energy (SSE), Glasgow, Scotland, UK

Spent a week in SSE's Glasgow office and learnt about different aspects within the turbines package such as EIA for consents and planning, single line diagram of the project and the wind turbine arrays, weather forecasting and weather windows for decision making related to operation and maintenance, and risk assessment and quality management

Part-Time engineer, E.MECHANIX Design office, Alexandria, Egypt

Participated in different tasks such as modelling and dimensioning of Heat Exchangers as per TEMA standards, and selection and sizing of piping system as per ASME B31.3

Intern, Engineering Consultants Group S.A (ECG), Egypt

Six-Month internship in the construction of a chemical plant in Wadi El-Natroun owned by Obegi for Chemical Industries and Polymers

- Inspection of the construction phase by comparing the P&IDs with the pipe isometrics and the erection installation
- Validate materials supplied by the contractor
- Process piping pre-fabrication, erection, NDT and hydrostatic tests
- Static & Rotating equipment installation and erections "Centrifugal, Mono Pumps & Blowers"

AquaPhoton Academy, Alexandria, Egypt

Mechanical Design Engineer - Designing and Manufacturing of Remotely Operated Vehicles (ROV)

ACADEMIC PROJECTS

- Experimental testing of a floating offshore wind turbine in the wave tank of Ecole Centrale de Nantes
- Conceptual design of a floating platform for NREL 5-MW wind turbine
- Investigation of the dynamic response of catenary mooring lines for an FPSO using DeepLines software
- Study of the hydrodynamic response of a floating offshore wind turbine using NEMOH BEM solver
- Developing a code to for hydrodynamic loads in different sea states on a monopile using Morison equation and DNV standards.
- Numerical simulation of a tidal turbine using MATLAB and Q-Blade
- Simulation of the hydrodynamic loads over an offshore structure using STAR CCM+
- Numerical simulation of the airfoil of the DTU 10-MW reference wind turbine with trailing-edge flaps using STAR CCM+
- Determination of a design load case for a fixed offshore wind turbine in the North Sea using IEC standards
- Developing a code for site assessment in the Balearic Sea using R for potential wind turbines installation
- Met-ocean climate characterisation to produce an offshore operation plan for the deployment of floating offshore wind turbines
- Design of a shell and tube heat exchanger using HTRI

SKILLS

Software:MATLAB, Octave, R, ANSYS Fluent, Star CCM+, DeepLines, Diodore, Q-Blade, SolidWorks, AutoCAD, Microsoft Office.Languages:Arabic (Native)English (Fluent, C2)French (Intermediate, B1) (Currently learning)

EXTRACURRICULAR ACTIVITIES

- Played for the Egyptian national field hockey team for 6 years where I participated in the World Cup, and 2 African Cups
- Team Captain of Smouha club in Egypt for 13 years
- Played for Western Wildcats club in Scotland, and HC Nantes in France

(Expected graduation: September 2020)

(September 2018 – January 2019) (February 2019 – July 2019) (September 2019 – September 2020)

(September 2013 - June 2018)

(February 2020 – August 2020)

(December 2018 - December 2018)

(July 2018 – September 2018)

(June 2017 – December 2017)

(July 2015 – July 2016)