

Ebrahim Malayjerdi

Contact

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Education

- 2013-2015** | M.Sc., Mechanical Engineering Department (Marine Engineering), Sharif University of Technology, Tehran, Iran
Cumulative GPA: 17.20/20
Thesis: Vibration control of a Tension Leg Platform under dynamic loads.
(19.8/20)
Advisers: Pro. Mohamadreza Tabeshpour.
- 2009-2013** | B.Sc., Mechanical Engineering, Marine engineering (Naval Architect), KMSU, Iran.
Cumulative GPA: 16.20/20
Thesis: Structural analysis of a Jack up platform under hydrodynamic loads **(19.5/20)**

Honors and Awards

- 2013** | Ranked **3st** in the **Marine Engineering Department of KMSU** among all of graduates.
- 2013** | Ranked 5th in Iran MSc entrance exam in Mechanic Engineering group (marine engineering) in 2013.
- 2015** | **THE BEST THESIS** in the marine engineering department of SUT.

Research Interest

- Fluid-Structure analysis
- Renewable Energy
- Structural Integrity Assessment
- Fatigue, performance and reliability
- Vibration Control
- Fixed and floating offshore structures

Publications

- 2014** | **Ebrahim Malayjerdi**, Mostafa Jafar Zadeh, Mozhgan Sirus, **Performance Evaluation of Platform Rig Jack up**. The 5th Offshore Industries Conference, Tehran, Iran, 2013.
Amirhossein Jokar, **Ebrahim Malayjerdi**, Emad Rabei, Design process optimization for small high speed. The 15th Marine Industries Conference, Kish, Iran, 2013.
Ebrahim Malayjerdi, Mohamad Tavakoli, Mohamadsaaeed Seif, Numerical analysis of aerodynamic characteristics of a wing in ground effect (solid) and water (flexible) in the state of the fixed and mobile surface. The 2st Applied Hydrodynamics Conference 2013.
- 2015** | **Ebrahim Malayjerdi**, Mohamadreza Tabeshpour, **Review of vibration control of marine structures**. Journal of Acoustic and Vibration, Iran, 2015.
Ebrahim Malayjerdi, Mohamadreza Tabeshpour, Response Amplitude Operators of Displacement, Velocity, and Acceleration of TLP. The 17th Marine Industries Conference, Kish, Iran, 2015.
Ebrahim Malayjerdi, Vahidreza Jahanmard, Mohamadreza Tabeshpour, Spectral Approach to Wave Force Prediction, The 6th Offshore Industries Conference, Tehran, Iran, 2015.
Pooya Ranjbar, **Ebrahim Malayjerdi**, Determining of the Capacity of the Jacket Platforms by Non-Linear Pushover Analysis, The 6th Offshore Industries Conference, Tehran, Iran, 2015.
- 2016** | Tabeshpour, Mohammad Reza, and **Ebrahim Malayjerdi**, **Investigation of pitch motion portion in vertical response at sides of a Tension-Leg Platform**. Journal of Marine Science and Application 15.2 (2016): 175-181.
Ebrahim Malayjerdi, Mohamadreza Tabeshpour, **Frequency Domain Analysis of Froude Krylov and Diffraction Forces on a TLP**. International Journal Ocean System Engineering, 10.12989/ose.2016.6.3.233.
Ebrahim Malayjerdi, Ali Ahmadi, Mohamadreza Tabeshpour, Dynamic Analysis of TLP in intact and damaged tendon conditions. The 18th Marine Industries Conference, Kish, Iran, 2016.

- 2018 | Mohamadreza Tabeshpour, Ali Ahmadi, **Ebrahim Malayjerdi**, **Investigation of TLP behavior under tendon damage**, Journal of Ocean Engineering, 2018.

Some Research and Work Experiences

- 2012-2013 | **Iranian Offshore Engineering and Construction Company (IOEC). (8month).**
Project:
- In-place analysis of jack-up and jacket platforms (sacs software).
 - Evaluation of technical documents.
 - Preparing shop drawing and welding drawing of jacket platforms (AutoCAD)
 - Surveying equipment construction at sites
- 2014 | **Sharif University of Technology, Mechanical Engineering Department.**
Final Project for High-Speed Course:
- Numerical analysis of aerodynamic characteristics of a wing in ground effect (solid) and water (flexible) in the state of the fixed and mobile surface
- 2014 | **Sharif University of Technology, Civil Engineering Department.**
- Vibration control of an 8-story building with visco-elastic damper and viscose fluid damper under earthquake excitation (sap software).
 - Active control of multi-degree of freedom structures under earthquake excitation using optimal control, pole placement and the effect of time delay in response, computer code in MATLAB.
- 2014 | **Sharif University of Technology (Laboratory of Condition Monitoring)**
Project: I
- An experimental test of multiple degrees of freedom system under random magnetic excitation in order to determine the characteristics of the random vibration and also compare the experimental results with a computer code in MATLAB.
 - Shaking table test of a mass-spring system with two dampers (viscous and magnetic).
- 2015 | **Sharif University of Technology (Center of Excellence in Hydrodynamics and Dynamics of Marine Vehicles)**
Project:
- Developing a computer code in order to generate a time series of irregular waves and also calculate statistical parameters of waves in frequency and time domains.
 - Developing a code to analyze mooring lines. (Determining of coordinates of anchors, mooring line configuration, stiffness matrix).
 - Hydrodynamic analysis of Tension leg platform, Truss spar and Semi-submersible platforms by ANSYS AQWA.
- 2016 | **Iran shipbuilding and offshore complex co. (7 months)**
Project: This project was regarding Structural Analysis of two trawler ships.
- 2017 | **Sharif University of Technology (Center of Excellence in Hydrodynamics and Dynamics of Marine Vehicles)**
Project: Assessment of a TLP under damage conditions. (Research Assistant)
- 2018 -Present | **Islamic Republic of Iran Shipping Lines (IRISL Group)**
Procurement Engineer (SHIP MANAGEMEN DEPARTMENT)
- A member of a ship management department as a procurement engineer.
 - Responsible for supply needed stores and spare parts of five handy max bulk carrier vessel.
 - In charge of supply all required spare parts for dry docking of five handy max bulk carrier vessel in shipyard.
 - Familiar with all on board machineries including Main/Engine, Generators (Auxiliary Engine), Purifier, Fresh Water Generator, Compressors, Pumps, Boiler, etc.
 - Tackling Vessel's technical as well as procurement problems in collaborating with superintendents.
 - Negotiating with vendors to get the best price which meets our requirements for goods and services.
 - Working with forwarding companies and tracking shipments from EXW of suppliers, all around of world, to on board of vessel.

- Ensuring that products and services are purchased in a planned, controlled and cost effective manner, in accordance with agreed budgets and operational requirements.
- Following up weekly maintenance of vessels.
- Familiar with different types of marine paints and lube oils.

2019-Present | **Tutor @ Pars Pazhouhan Institute**

In this course, three kinds of floating structures including Tlp, Semisubmersible, and floating wind turbines are simulated in ANSYS/AQWA and following analyzes will be carried out and then all corresponding results will be discussed:

- Frequency Domain Analysis (Froud krylov, Diffraction, Radiation).
- Mooring Analysis.
- Stability Analysis.
- Hydro dynamic Analysis.
- Evaluation of Second order Wave Forces (sum frequency, low frequency).
- Time domain Analysis under regular wave, irregular waves, Wind, Current, Group Waves.
- Time domain analysis under Cable damage condition.

Teaching Experience

- 2012-2013** | Teaching assistant in hydrostatic and differential equations courses in KMSU, Marine Engineering Dept.
- 2014-2016** | Research and teaching assistant at the Research Center of Marine Engineering of Sharif University of Technology (Marine Lab)
- 2015 -2016** | Teaching assistant in Design and analysis of deep offshore platforms and Design and analysis of fixed offshore platforms at Sharif University of Technology, Mechanical Engineering Dept.
- 2014-2016** | Teaching assistant in Industrial Drawing at Sharif University of Technology, Graphics and Engineering Center.
- 2012-2013** | Teaching assistant in hydrostatic and differential equations courses in KMSU, Marine Engineering Dept.

Computer Skills

- **Programming and math:** MATLAB
- **Geometrical modeling:** SOLID WORKS, AUTO CAD
- **Structural analysis:** ABACUS, ANSYS APDL, SACS, SAP.
- **Hydrodynamic:** ANSYS AQWA, MOSES, ANSYS-CFX.
- **Hydrostatic:** Maxsurf.
- **ICDL:** Microsoft Windows, Microsoft Office.

Language

- **Persian:** Mother Tongue
- **English:** Proficient