

# Pouya Zarbipour-Lakposhteh

[Google Scholar](#) | [LinkedIn](#) | [Personal Website](#) | [Email](#)

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## Research Interest

Reliability Analysis, Coastal Engineering, Risk and Resilience, Machine Learning, Optimization

## Education

**Tarbiat Modares University (TMU)**, Tehran, Iran Sep. 2021 – Feb. 2024  
*MSc in Civil Engineering (coastal, port, and marine structures) / GPA: 15.03 (out of 20)*  
Thesis Title: Probabilistic Evaluation of Effluent Discharge Performance in Desalination. | [Link](#)  
Supervisor : Prof. Hassan Akbari

**The National University of Skills (NUS)**, Tehran, Iran Sep. 2015 – Feb. 2020  
*ASc and BSc in Civil Engineering / GPA: 14.94 (out of 20)*

## Achievements/Awards

**Ranked 2<sup>nd</sup> graduates in marine structures department**, Iran 2023  
*Awarded for MSc / Ranked 102<sup>nd</sup> in the world for civil engineering according to US News.*

**Governmental Fellowship**, Iran Fall 2021  
*Awarded for MSc / Tarbiat Modares University – Ranked 7<sup>th</sup> in Iran according to US News.*

**Volunteer**, Iran Feb. 2020 – Jun. 2020  
*Awarded for COVID-19 / Iranian Red Crescent*

**Governmental Fellowship**, Iran Fall 2015  
*Awarded for ASc and BSc / The National University of Skills*

## Teaching, Research And Professional Experiences

**Supervisor and Executive Engineer**, Iran May 2024 – present  
*Iran Construction Engineering Organization (IRCEO)*

- Supervision of the construction of building structures based on Iran's national building regulations

**Reliability, Risk, Resilience, and Optimization, RA** (Prof. Akbari) Sep 2023 – present  
*Tarbiat Modares University*

- Introducing a new RBDO approach for designing optimal berm breakwaters with required performance
- Investigating resilience in coastal structures, especially berm breakwaters
- Applying machine learning to coastal structures, particularly to forecast berm breakwater recession

**Technical Expert of Lab**, Civil Computing Laboratory Apr 2023 – Feb 2024  
*Tarbiat Modares University*

**Numerical Methods in Marine Engineering, TA** (Prof. Akbari) Spring 2023  
*Tarbiat Modares University*

- Teaching assistant and Mike zero software training

## Publications

- [J] **Reliability design of seawater desalination outfalls based on a novel probabilistic environmental assessment.**  
Published in Ocean Engineering (Q1 and IF: 4.6) | First Author | [DOI](#)
- [J] **Reliability-Based Design Optimization of Berm Breakwaters with Different Reshaping and Dependency Structures.**  
Under Review in Coastal Engineering (Q1 and IF:4.2) | [DOI](#)
- [J] **Bayesian regression for the prediction of berm breakwaters recession.**  
Under Review in Coastal Engineering (Q1 and IF:4.2) | First Author | [DOI](#)
- [J] **Probabilistic Design of Berm Breakwaters Considering Environmental Parameter Correlations.**  
Under Review in Ocean Engineering (Q1 and IF:4.6) | [DOI](#)
- [J] **Predicting Berm Breakwaters Recession Using Machine Learning.**  
In Progress | First Author
- [C] **Assessment of the Spread of Desalination Plant Effluent Study Area: Saqi Koothar Desalination Plant, Bandar Abbas.**  
Presented at 1<sup>st</sup> International Conference on Blue Economy | First Author | [Link](#)

## Project

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### The Persian Gulf Coastline Monitoring

Dec 2022 – Feb 2023

*GIS and Remote Sensing course, Tarbiat Modares University*

- Implemented using ArcGIS Pro, Google Earth Engine and ENVI software
- Analyzed the Persian Gulf coasts quantitatively and qualitatively and examined the effects of rising and falling water and temperature

### Geomorphic and Hydrologic analysis for Bushehr in Iran

Dec 2022 – Jan 2023

*GIS and Remote Sensing course, Tarbiat Modares University*

- Analyzed the drainage density map, flow distance, Gravelius and Miller's coefficient, bifurcation coefficient index, slope, direction of slope, accumulation of flow, catchment, and river rank in the basin.

### Monitoring the surface temperature of the Persian Gulf in a 10-year period

Nov 2022 – Nov 2022

*GIS and Remote Sensing course, Tarbiat Modares University*

- Implemented using ArcGIS Pro, Google Earth Engine
- Chronological history and spatial analysis of the coasts of the Persian Gulf in a 10-year period

### Design of the Kish Island Breakwater in the Persian Gulf

Jun 2022 – Jul 2022

*Design of Conventional Marine Structures course, Tarbiat Modares University*

- Implemented using PLAXIS 3D, Geo Studio, Microsoft Office, and CEM manual
- Design of three types of rubble mound, berm and caisson breakwaters

### Design of the Kish Island Pier in the Persian Gulf

Jun 2022 – Jul 2022

*Design of Conventional Marine Structures course, Tarbiat Modares University*

- Implemented using PLAXIS 3D, SAP2000, Geo Studio, and Microsoft Office
- Design of two types of the block pier, pile, and deck

### Hydrodynamic model for the Persian Gulf

Jun 2022 – Jul 2022

*Numerical Methods in Marine Engineering course, Tarbiat Modares University*

- Implemented using Mike Zero (SW and HD)
- Investigating the changes in Surface elevation, pressure, current speed, etc. in the Persian Gulf

## Skills

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**Personal Strengths:** Excellent communication and interpersonal skills, leadership and teamwork abilities, organizational skills, and time and project management.

**Programming:** MATLAB, Python, Fortran.

**Software:** UQLab, Sacs, Mike Zero, PLAXIS 3D, SAP2000, Mixzone Cormix, ArcGIS Pro, Google Earth Engine.

## Notable Courses

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**GIS and Remote Sensing**, First Grade (18.6/20)

**Numerical Methods in Marine Engineering**, First Grade (16.5/20)

**Marine Geotechnics**, Second Grade (18.3/20)

**Design of Conventional Marine Structures**, Second Grade (15/20)

**Offshore Platform**, Second Grade (14.5/20)

## Test Scores

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**TOFEL**

In Progress

Reading, Listening, Writing, Speaking

## References

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### Dr. Hassan Akbari

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Tarbiat Modares University, Tehran, Iran  
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### Prof. Seyed Ali Akbar Salehi Neyshabouri

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### Prof. Mehdi Shafieefar

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