

**Personal data**

Name Mohammad Daghigh  
Date of Birth 12 June, 1965  
Marital status Married, two children

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**Education**

Jan. 1993 – Jan. 1997 Delft University of Technology, Delft-The Netherlands

Ph.D. degree in Structural Safety.

Subject of PhD study: Structural System Reliability Analysis of Jack-up Platforms under Extreme Environmental Conditions, Promotors: Prof. ir S. Hengst - Prof. ir. A.C.W.M. Vrouwenvelder

Feb. 1988 - Jun. 1990 Tabriz University, Tabriz-Iran

MSc degree in Structural Engineering,

Subject of MSc Study: Influence of Effective Stresses on the Permeability of different Soil Types

Feb. 1984 - Aug. 1987 Tabriz University, Tabriz-Iran

BSc degree in Civil Engineering

**Certificate** PMP (Project Management Professional Certificate), Dubai Prometric Center, Dec. 2015

**Languages** Farsi (Iranian), English (Good, IELTS Score 6.5),  
Arabic (below moderate) and Dutch (moderate)

**Books** Fundamentals of Practical Design of Offshore Structures (In Persian) Published  
by Fadak-Isatis book in Iran, ISBN: 978-600-160-176-7, 2014.

**Work Experience**

Jun. 1997 till Dec. 1997 Tehran-Berkeley Consulting Engineers, Tehran, Iran

Supervisor of Civil and Marine Structures Projects.

Worked on the design of a concrete quay for ships. Analyses the damage of the column of an offshore platform and made recommendations for repair and renovation.

Jan. 1998 till Mar. 2000 Omran-Iran Consulting Engineers Tehran, Iran

Supervisor of Civil and Marine Structures Projects

Design and calculations for sheet piles. Design and calculations of the concrete structures around a ship lift. Design and calculations for a pilot station, a buoy for temporary mooring of ships.

Dec. 2001 till Apr. 2002 Sharif University of Technology, Tehran, Iran

Manager of a Short Course on "Offshore Structures, Design and Construction".

Organized and invited experience persons from the industry to give lectures on offshore structures.

Mar. 2001 till Mar. 2002 Ministry of Road and Transportation, Tehran, Iran

Manager of "Structures and Facilities for Ship Repairs" project. Made a draft for Marine Structures Regulations.

Jun. 2001 till Oct. 2001 Ports Engineering Organization, Tehran, Iran

Manager of "Design of a Floating Bridge for Urmia Lake in Iran" project.

Feb. 2003 till July 2004 Panah Saz Iran Company, Tehran, Iran

As Project Manager: Design and Construction of a combined cable and arch bridge design, Ahvaz, Iran.

Mar. 2008 Ministry of Road and Transportation, Tehran, Iran

Manager of "Mooring Design of Ships" project. Made a draft for Marine Structures Regulations.

July 2004 till now Pars Oil and Gas Company, Tehran, Iran

As Project Manager: Design of SPM buoy, Analysis of offshore platform projects with SACS, Installation of Fixed Platforms, Design and Installation of Pipelines as presented in CDR\_POGC document attached.

Feb. 1998 till Mar. 2003 Sharif University of Technology, Tehran, Iran

Assistant Professor at the Department of Mechanical Engineering, Ocean Engineering Section.

Giving lectures and supervise graduate students. See attachment below for list of courses and theses.

Dec. 2005 till 2015 Islamic Free University- Branch of Science and Research, Tehran, Iran

Assistant Professor at the department of Ocean Engineering department and Marine Science and Technology Department (Giving some lectures).

Feb. 1998 till Mar. 2003 Sharif University of Technology, Tehran, Iran

Assistant Professor at the Department of Mechanical Engineering, Ocean Engineering Section.

Later Part Time Assistant Professor at the Civil Engineering Department of Khaje Nasir Toosi University, Tehran, Iran, and Islamic Azad University Giving lectures and supervise graduate students.

See attachment below for list of courses and theses.

At the university gave lectures on the following subjects:

- Structural Analysis (BSc Course)
- Soil Mechanics (BSc Course)
- Hydrostatics of Ships (BSc Course)
- Probability and Statistics (BSc Course)
- Static (BSc Course)
- Strength of Materials I and Laboratory (BSc Course)
- Design of Ship Structures (MSc Course)
- Stability of Structures (MSc Course)
- Design of Fixed Offshore Platforms (MSc Course)
- Reliability Analysis of Structures (PhD, MSc Course)

Supervised students for the following BSc theses:

- Design of Compressional Elements in Marine Structures (2001)
- Buckling Analysis of Cylindrical Shells using Finite Element Method (2000)
- Investigation of Mechanical Behavior of Contact Problems for Jack-up Leg to Hull Structure (2000)
- Design of a Fishing Vessel Equipped with the fish Pooder Production Unit (1999)
- Hydrostatic Analysis of Launching of Ships (2000)
- Stability of Ship Structures in Rolling and Damaged Condition (2001)
- Computer Package for Stability of Ships and Experimental Methods of Stability Analysis (2002)
- Fatigue Analysis of Marine Structures (2001)
- Mathematical Models for Prediction of Sea Waves from Observed Wind Data (2002)
- Computer Package for Mooring Line Analysis of Floating Structures (2001)
- Semi-Rigid Connection in Marine Structures (2000)

Supervised students for the following MSc theses:

- Interaction of Wave and Structure for Dynamically Sensitive Offshore Platforms, Sharif University of Technology, Majid Noorabadi, (2001)
- Investigation of Load Transfer Between a Jack-up Drilling Platform and a Fixed Platform, Sharif University of Technology, Reza Golzadeh Bashiz, (2001)
- Probabilistic Analysis of Fixed Offshore Structures, Sharif University of Technology, Sajjad Helal Makouee, (2003)
- New Conceptual Designs for Guyed Towers, Sharif University of Technology, Shervin Foroughi (2004)
- Optimization of Leg's Batter in Jacket Type Platforms, University of Tehran, Mehdi Mohammadnejad (2008)

- Aerodynamic and Structural Analysis of Offshore Wind Turbines in Persian Gulf, University of Tehran, Mehrdad Salehi, (2009)
- Design and Construction of Retaining Structure in Deep Excavation, Islamic Azad University-Zanjan Branch, Siavash Pour Mohammadi (2010)
- Nonlinear Dynamic Analysis of Jack-up Platforms, Khaje Nasireddin Toosi University, Azadeh Jafari (2010 Feb.)
- Effect of Boundary Condition on Assessment of Jack-up Dynamic Responses, Khaje Nasireddin Toosi University, Saghy Saeed Tehrani, (2010 April)
- Buckling of Corroded Offshore Pipelines under High Pressure/Temperature Cycles, Amir Kabir University of Technology, Hamze Arman, (2010 Sep.).
- Investigation of Foundation Strengthening of Weak Based Special Structures, Islamic Azad University-Zanjan Branch, Farid Rasi, (2010 Sep.)
- Effect of Crude Oil on Geotechnical Parameters of Soil (Unilateral, CBR) and EIA assessment of different refining methods", Islamic Azad University-Zanjan Branch, Hadi Jafari, (2010 Sep.)
- Dynamic Analysis and design of a Floating Offshore Platform, Amir Kabir University of Technology, Mehdi Karimi, (2011 Feb.)
- Investigations the different methods of Seepage Control in Deep Excavation near of Sea Coast (Case Study: Abgir Project of Pars), Islamic Azad University-Zanjan Branch, Behzad Aghaee Meibodi, (2011 Oct.)
- Dynamic Analysis of Earth Dams and Proposing the Different Methods of Reinforcement (Case Study, Chitgar Dam), Islamic Azad University-Zanjan Branch, Mahmoud Reza Zamani Farahani, (2011 Oct.)
- An Investigation into the Behavior of Reinforced Soil Retaining Walls with Geo-grid Adjacent to River Bank, Islamic Azad University-Zanjan Branch, Amir Hossein Yousef Doost, (2011 Jun.)
- Seismic Analysis of Retaining Wall Reinforced with Geosynthetic under Horizontal and Vertical Earthquake Loading using ABAQUS Software", Islamic Azad University-Zanjan Branch, Vahid Heidari, April 2012.
- Nonlinear Analysis of Jacket Type Fixed Offshore Platform Considering Pile- Soil, Azad University- Science and Research Branch, Mohammad Beigi kasvaei, September 2013.
- Providing a Risk Management Model in Earth Dam Projects from the point of view of Contractors (Case Study Polrud Dam), Islamic Azad University-Karaj Branch, Yaser Shairazi, Feb. 2014.
- The Analysis of Depositing the Surface of the Ground Caused by Twin Covered Tunneling in the presence of the Level of Underground Water in the Method of NATM, Islamic Azad University-Zanjan Branch, Reza Sobh Zahedi, Spring 2014.
- The Analysis of Depositing the Surface of the Ground Caused by Twin Covered Tunneling and the effect of Tunnel Axes distance by the presence of the Level of Underground Water using the Method of TBM, Islamic Azad University-Zanjan Branch, Mehran Kordlou, Spring 2014.
- Numerical Study of Aerodynamic Performance of Offshore Platform by CFD Method, Azad University- Science and Research Branch, Arash Buick Khorrami, Jan. 2015.
- Vulnerability Assessment Model of Roads in Passive Defense Point of View by RAMCAP Method, Case Study: Vulnerability Assessment of Roads and National Highway Entrances of One Western Pars-Assaluyeh, Islamic Azad University-Karaj Branch, Mohsen Ebrahimnejad, Sept. 2017.
- Three Dimensional Effects of Soil Layers on Vulnerability of Underground Structures against Surface Explosion, Islamic Azad University-Zanjan Branch, Ali Babakan, June 2017.
- Quantitative Risk Assessment (QRA) of Fixed Offshore Platforms subjected to Accidental Load Effects, Islamic Azad University- Science and Research Branch, Mohammad Hasan Sarvi, September 2017.
- Determination of Bearing Capacity of Spudcan Foundation for Offshore Jack-up Platforms According to Elasto-Plastic Modelling of Soil, Islamic Azad University- Science and Research Branch, Seyed Shahin Ghorashi, September 2017.
- Reliability Analysis of Single Point Mooring (SPM) System under Different Environmental Conditions, Islamic Azad University- Science and Research Branch, Behrouz Eghbali, September 2017.

- Reliability Assessment of Existing Subsea Pipelines in Persian Gulf, Petroleum University of Technology, Mahmoodabad Faculty of Marine Science, Department of Offshore Structures Engineering, Mohammad Mahdi Shabani, October 2017.
- Effects of Metro Tunneling on Ground Settlement by Numerical Modeling, Islamic Azad University-Zanjan Branch, Morteza Darabi, March 2018.

**Publications:**

- Daghigh M., Hengst S., Vrouwenvelder A., Boonstra H.; "Reliability Analysis of Dynamic Structures"; Journal of Scientia, Iran; March 2003.
- Daghigh M., "Reliability Analysis of Structures"; Research Project, Sharif University of Technology 1999.
- Daghigh M., "Idealized Models for Buckling Analysis of Orthotropic Stiffened Plates"; Research Project, Sharif University of Technology; 2000.
- Daghigh M., "Investigation of Ship Motions in Launching Process"; Research Project, Sharif University of Technology; 2001.
- Daghigh M., Sabzi M. "Design of a Slipway for Launching of Ships"; Second National Conference of Marine Industry, Tehran, Iran; Dec. 2000.
- Daghigh M., Sanaee G. and Fazaee G. "Investigation of Nonlinear Models for Lateral Strength of Soils"; Fourth International Conference on Coasts, Ports and Marine Structures, Iran, Bandar-Abbas Port; Nov. 2000.
- Daghigh M., "Investigation of Strength and Behavior of Stiffened Plates in Aerospace Structures"; First International Conference of Aerospace Structures", Sharif University of Technology; Dec. 2000.
- Daghigh M., "Buckling Behavior of Cylindrical Shells"; First International Conference of Aerospace Structures, Sharif University of Technology; Dec. 2000.
- Boon B., Vrouwenvelder A., Hengst S., Boonstra H. and Daghigh M., "System Reliability Analysis of Jack-up Structures: Possibilities and Frustrations"; Sixth International Conference, The Jack-up Platform Design, London; Sept. 1997.
- Daghigh M., Hengst S., Vrouwenvelder A. and Boonstra H. "System Reliability analysis of Jack-up Structure under Extreme Environmental Condition", Proceedings of the 8<sup>th</sup> International Conference on the Behavior of Offshore Structures- BOSS '97, 1997, Vol. 3, pp. 127-143.
- Daghigh M., Dehghan B. "Prediction of Ultimate Load Carrying Capacity of Nissan Junior Axle Beam using Elasto-Plastic Analysis Procedure"; ISME 2001, 5th International Mechanical Engineering Conference, Rasht, Iran; June 2001.
- Daghigh M., "Buckling and Elasto-Plastic Analysis of Stiffened Cylindrical Shells"; The Second European Conference on Computational Mechanics, Cracow, Poland; June 2001.
- Daghigh M., "A new Formulation for Equivalent Hydrodynamic Modeling of the Jack-up Legs" ; 21st International Conference on Offshore Mechanics and Arctic Engineering, OMAE2002, Oslo, Norway; June, 2002.
- Daghigh M., Taghi-Pour R. and Seif M.S., "Mooring System Design and Optimization for Floating Bridge of Urmia Lake"; 21st International Conference on Offshore Mechanics and Arctic Engineering, OMAE2002, Oslo, Norway; June, 2002.
- Daghigh M., "Aspects of Finite Element Modeling in Design and Response Analysis of Floating bridge of Urmia Lake in Iran"; 5th International Conference on Coasts, Posts and Marine Structures, ICOPMAS 2002, Ramsar, Iran; Oct., 2002.
- Daghigh M., "Investigation of Load Transfer between a Drilling Jack-up Platform and a Fixed Platform"; Fourth National Conference of Marine Industry; Dec. 2002.
- Daghigh M. and Hellal Makuee S., "Application of  $\beta$ -Unzipping Method in Offshore System Reliability Analysis under Changing Load Pattern"; 22nd International Conference on Offshore Mechanics and Arctic Engineering, OMAE2003, Cancun, Mexico; June 2003.
- Daghigh M. and Shabakhty N. "A Modified Moment Method in Structural Reliability"; European Safety and Reliability Conference, ESREL2003, Maastricht, The Netherlands. June 2003.
- Shabakhty N. and Daghigh M., "Effect of Soil-Structure Models on Stochastic Response of Jack-up Platforms"; European Safety and Reliability Conference, ESREL2003, Maastricht, The Netherlands. June 2003.

- Daghigh M. and Bagheriasl R., "Reliability of Subsea Pipelines" ;Proceedings of ICOPMAS 2006; 7th International Conference on Coasts, Ports and Marine Structures November 27–29, 2006, Tehran, Iran.
- Mohammadnejad M., Dolatshahi Pirooz M. and Daghigh M., "Optimization of Leg's Batter in Jacket Type Platforms" ; Fourth National Conference in Civil Engineering, Tehran University, May 2008, Tehran, Iran.
- Daghigh M., Alagheband S. and Tahmasbi, H., "Applying The Reliability Analysis Concept In On-Bottom Stability Design of Submarine Pipelines", 8th International Conference on Coasts, Ports and Marine Structures, November 27–29, 2008, Tehran, Iran.
- Mohammadnejad M., Dolatshahi M. and Daghigh M. "Determination of Critical Leg's Batter in Jacket Type Platform Before Piling", 8th International Conference on Coasts, Ports and Marine Structures, November 27–29, 2008, Tehran, Iran.
- Daghigh Hamideh, Karami Kjaniki Ali and Daghigh Mohammad, "Investigation of Wave Heights on Kiashar Port by BW and NSW Modules", 7<sup>th</sup> WSEAS International Conference on Fluid Mechanics (FLUID'S 10), May 20-22, 2009, Zhejian University of Technology and China Jiliang University, China.
- Kiasat Mehdi Saeed, Arman S. Hamze and Daghigh Mohammad, "Analysis and Design of a Composite Gas Pipeline Subjected to Environmental Conditions of Persian Gulf", 17<sup>th</sup> Annual (International) Conference on Mechanical Engineering, ISME2009, May 2009, University of Tehran, Iran.
- Daghigh Hamideh, Karami Khaniki Ali and Daghigh Mohammad, "Investigation of Current Pattern on Kiashar Port by BW and HD Modules of MIKE21 Software", OCEANS2009, Mississippi Coast Coliseum and convention Center, Oct 26-29, 2009, BILOXI, MS, USA.
- Kiasat Mehdi Saeed, Arman S. Hamze and Daghigh Mohammad, "Failure Analysis of a Subsea Composite Gas Pipeline Carrying Hydrodynamic Loads", MIC2009, 11<sup>th</sup> Marine Industries Conference, Nov. 10-12, 2009, Kish Island, Iran.
- Salehi Mehrdad, Dolatshahi Moharram and Daghigh Mohammad "Aerodynamic and Structural Analysis of Offshore Wind Turbines in Persian Gulf", MIC2009, 11<sup>th</sup> Marine Industries Conference, Nov. 10-12, 2009, Kish Island, Iran.
- Jafari A., Asgarian B. and Daghigh M. " Effect of Foundation Modeling on Extreme Response of Offshore Jack-up Unit", Paper No. OMAE-20717, Proceeding of the ASME 2010, June 6-11, 2010, Shanghai, China.
- Mohammadnejad M., Dolatshahi M. and Daghigh M. "Optimization of Legs Batter in Fixed Offshore Platforms", Paper No. 2010-TPC-155, The Twentieth International Offshore and Polar Engineering Conference ISOPE-2010, June 20-26, 2010, Beijing, China.
- Daghigh, M. "An Alternative Conductor Guide Design", Technical & Professional Journal of Exploration and Production, July 2010, pp. 44-48, No. 70, National Iranian Oil Company.
- Yari Borojeni A. Habibi N., Farrahi G., Daghigh M. and Majzoobi G. "Investigation of effect of different parameters on fatigue life of marine structures", The Twentieth Marine Industries Conference", 18-20 Oct. 2010, Zibakenar, Iran.
- Saeed Tahrani S., Asgarian B., Daghigh M. and Kiaei F. "Comparison of Different Dynamic Amplification Factors from Dynamic and Semi-Static Nonlinear Random and Deterministic Analysis of a Jack-up Platform considering effect of Soil- Structure Interaction", The Twentieth Marine Industries Conference", 18-20 Oct. 2010, Zibakenar, Iran.
- Daghigh M., Panahi R. and Fourogi Sh. "Review and Evaluation of Existing Standards on Near-shore and Offshore Mooring Design", , The Twentieth Marine Industries Conference", 18-20 Oct. 2010, Zibakenar, Iran.
- Saeed Tahrani S., Asgarian B., Daghigh M. and Kiaei F. "Investigations on Nonlinear Dynamic and Semi-Static Nonlinear Random and Deterministic Analysis of Jack-up Platforms considering Soil- Structure Interaction", The Ninth International Conference on Coasts, Ports and Marine Structures", 29th Nov.- 1th Dec. 2010, Tehran, Iran.
- Habibi N., Farrahi G., Majzoobi G. and Daghigh M. "Mechanical Properties of St52 Steel in High Temperature", Fifth Conference on Steel and Material Forming, Sharif University of Technology, 11-13 Oct. 2011, Tehran, Iran,
- Habibi N., Farrahi, G., Majzoobi G., Mahmoudi A.H. and Daghigh M. "Experimental Study of Repair effect on Residual Stress Distribution of Circular Joints", The 13<sup>th</sup> Marine Industries Conference, 8-11 Nov. 2011, Kish Island, Iran.

- Habibi N., Yari Borojeni A., Farrahi G., Daghigh M. and Majzoobi G. "Reliability Analysis of Critical Joints of a Fixed Offshore Platform using Fatigue Crack Growth Model", The 13<sup>th</sup> Marine Industries Conference, 8-11 Nov. 2011, Kish Island, Iran.
- Habibi N. H-Gangaraj SM., Farrahi GH., Majzoobi GH., Nahnoudi AH., Daghigh M., Yari, A. and Moridi A. "The effect of Shot Peening on Fatigue Life of Welded Tubular Joint in Offshore Structure", *Materials and Design (1980-2015)*, Vol. 36, April 2012, 250-257.
- Peykano M., Zeinodini M. and Daghigh M., "Local Buckling of Corroded Tubular under Cyclic Compression and Tension Loadings", *Modares Civil Engineering, Journal* Vol. 11 Issue No. (4), p. 97-104.
- Daghigh M., Saeidtehrani S., Asgarian B. and Kiaei F. "Nonlinear Dynamic Analysis of Jack-up Platforms Considering Soil Structure Interaction", *The 2012 World Congress on Advances in Civil, Environmental, and Materials Research (ACEM' 12)*, Seoul, Korea, August 26-30, 2012.
- Daghigh M., Heidari V., Najafi Mahrokh A. "Dynamic Analysis of Geogrid-reinforced retaining wall and study Effective factors and propose an optimal design by using ABAQUS software", *The Tenth International Conference on Coasts, Ports and Marine Structures*, Nov. 2012, Tehran, Iran.
- Daghigh M., Heidari V., Moradi Moafagh V. "Comparison of the results of the numerical modeling and analysis of quasi-static of the geogrid-reinforced retaining wall", *The Tenth International Conference on Coasts, Ports and Marine Structures*, Nov. 2012, Tehran, Iran.
- Zeinoddini M., Hosseini S.A., Daghigh M. and Arnavaz S. "Structural Post-fire Behavior of the Steel I-Shape Beams-to-Cylindrical Columns", *Applied Mechanics and Materials*, Vol. 249-250, 2013, pp. 1057-1062.
- Heidari V., Daghigh M., Daghigh Y. and Najafi Mahrokh A. "Investigation of Water Permeation on Stability of Anchor Reinforced Retaining Wall in Saturated and Semi-Saturated Soils", *First National Conference in Geotechnical Engineering*, Mohaghegh Ardebili University, 2013.
- Ghorashi Sh, Daghigh M., Daghigh Y. and Bagdadi, J. " Investigation of Elasto-Plastic Soil Models on Settlement and Bearing Capacity of Jack-up Spudcan Foundations", *Eighteenth Marine Industries Conference*, Kish Island, 17-20 Oct. 2016.
- Eghbali B., Daghigh M., Daghigh Y. Azarsina F., "Single Point Mooring (SPM) System Analysis under Wave and Current Environmental Forces", *Nineteenth Marine Industries Conference*, Kish Island, 11-14 Dec. 2017.
- Daghigh M., Shabani M. M. and Etemadian A. "Reliability Assessment of Offshore Pipelines against VIV Fatigue", *Nineteenth Marine Industries Conference*, Kish Island, 11-14 Dec. 2017.
- Saeidtehrani S., Asgarian B., Daghigh M. and Kiaei F. "Study on Transient and Stationary Response of Jack-up Platforms", *Nineteenth Marine Industries Conference*, Kish Island, 11-14 Dec. 2017.
- Shabani M. M., Taheri A. and Daghigh M., "System Reliability Assessment of Offshore Pipelines in Iranian South Pars Gas Field", *Seventh International Offshore Industries Conference*, 22-23 May 2017, Sharif University of Technology, pp. 26 in Abstract of Articles.
- Taheri A., Daghigh M. and Shabani M. M., "Investigation of the effect of Local Buckling and VIV Fatigue on Failure Probability of Subsea Pipelines in Iranian South Pars Gas Field", *International Journal of Maritime Technology* 2018, vol. 9, 23-32.
- Eghbali B., Daghigh M., Daghigh Y. Azarsina F., "Mooring Line Reliability Analysis of Single Point Mooring (SPM) System under Extreme Wave and Current Conditions", *International Journal of Maritime Technology* 2018, vol. 9, 41-49.
- Shabani M. M., Taheri A. and Daghigh M., "Reliability Assessment of Free Spanning Subsea Pipeline", *Thin Walled Structures*, 120 (2017).
- Shabani M. M., Daghigh M. and Taravati R. "Comparison Between Conditional and Un-conditional Failure Probability of Corroded Gas Transmission Pipelines Considering Stochastic Process for Internal Pressure and Crack Growth Rate", *ICOPMAS 2018*, Tehran, Iran, 233-234.
- Shabani M. M., Daghigh M., Taravati R. and Zhou W. "Stochastic Based Multi-Objective Optimization of Corroded Gas Transmission Pipelines Using Importance Sampling Technique and Genetic Algorithm", *20<sup>th</sup> Marine Industry Conference, MIC2018*, 167.
- Saaed A., Daghigh M. "Dynamic Reliability Analysis of Moment Resisting Concrete Frames", *6<sup>th</sup> International Reliability and Safety Engineering Conference, IRSEC2020*, Shiraz University, Jan. 2021.