

Curriculum Vitae

Biographical information:

First Name: Abolfazl

Last Name: Dehghan Monfared

Gender: Male

Nationality: Iranian

Marital status: Married



Address (work):

Faculty of Petroleum, Gas and Petrochemical Engineering, Persian Gulf University, Shahid Mahini Boulevard, Bushehr, Iran.

Member of Faculty (since 2016), Head of Department (since 2017)

(Department of Petroleum Engineering, Persian Gulf University, Bushehr, Iran)

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EDUCATION

- **2011-2016:**
 - Ph.D. in Petroleum Engineering, Sharif University of Technology, Iran.
Credits Passed: 18 course+ 24 Dissertation
GPA: 18.00 Out of 20 (Percentile: 90 %).
*Dissertation Score: **Excellent** (equivalent to 20 out of 20).*
Graduation Date: Sep. 2016
- **2007-2010:**
 - M.Sc. in Petroleum Engineering (Reservoir Engineering), Petroleum University of Technology (Former AIT), Iran.
Credits Passed: 32
GPA: 18.98 Out of 20 (Percentile: 94.9%).
*Thesis Score: **20***
Graduation Date: Jan. 2010
- **2003-2007**
 - B.Sc. in Petroleum Engineering (Reservoir Engineering), Petroleum University of Technology (Former AIT), Iran.
Credits Passed: 144
GPA: 17.91 Out of 20 (Percentile: 89.55%).
Graduation Date: Aug. 2007

- **2001-2002:**
Pre-University Diploma in Mathematics & Physics, School of Dr. Hesabi, Borazjan, Bushehr, Iran.
- **1998-2001:**
High School Diploma in Mathematics & Physics at High School of Dr. Hesabi, Borazjan, Bushehr, Iran.

Ph.D. DISSERTATION:

- **“Theoretical and Experimental Investigation of Interaction between Nanoparticles and Carbonate Porous Media”**
- Supervisor: Dr. M. H. Ghazanfari
- Co-Supervisors: Dr. M. Jamialahmadi and Dr. A. Helalizadeh
- Advisor: Dr. M. Kazemeini

M.Sc. THESIS:

- **“Application of Automatic History Matching Techniques in Reservoir Simulation”**
Supervisor: Dr. A. Helalizadeh.

B.Sc. THESIS:

- **“Forecasting a Reservoir Behavior Using IPR/Decline Curve Analysis”** Under Supervision of Dr. A. Helalizadeh.

Military Service

- Served
- Iranian National Elite Fondation: Doing Research project instead of military service for Petroleum University of Technology.

HONORS & AWARDS:

2012	Selected for pursuing Ph.D. degree as an Elite Student (without Qualification Exam), Sharif University of Technology, Iran.
2010	Selected as a Member of Iranian National Elite Fondation , Iran
2007-10	Ranked 1st Among M.Sc. Students of Petroleum Reservoir Engineering at Petroleum University of Technology, Iran.
2007	Selected for pursuing M.Sc. degree as an Elite Student (without Qualification Exam), Petroleum University of Technology, Iran.
2003-07	Ranked 4th Among B.Sc. Students of Petroleum Reservoir Engineering at Petroleum University of Technology, Ahwaz, Iran
2003	Ranked 97th (Region III) in National Entrance Exam of Universities in the Country, Iran.

PUBLICATIONS:

JOURNAL PAPERS:

- Azadi Tabar, M.; Shafiei Y., Shayesteh M., **Dehghan Monfared, A.**, Ghazanfari, M. H.; Wettability alteration of calcite rock from gas-repellent to gas-wet using a fluorinated nanofluid: A surface analysis study. *Journal of Natural Gas Science and Engineering* 2020, 83, 103613
- Azadi Tabar, M.; Ghazanfari, M. H.; **Dehghan Monfared, A.**, Compare numerical modeling and improved understanding of dynamic sessile drop contact angle analysis in Liquid-Solid-Gas system
- *Journal of Petroleum Science and Engineering* 2020, 184, 106552
- **Dehghan Monfared, A.**; Ghazanfari M. H., Wettability alteration of oil-wet carbonate porous media using silica nanoparticles: electrokinetic characterization. *Industrial & Engineering Chemistry Research* 2019, 58 (40), 18601-18612
- Azadi Tabar, M.; Ghazanfari, M. H.; **Dehghan Monfared, A.**, On the size-dependent behavior of drop contact angle in wettability alteration of reservoir rocks to preferentially gas wetting using nanofluid. *Journal of Petroleum Science and Engineering* 2019, 178, 1143-1154.
- **Dehghan Monfared, A.**; Ghazanfari, M. H.; Kazemeini, M.; Jamialahmadi, M.; Helalizadeh, A., Wettability Alteration Modeling for Oil-Wet Calcite/Silica Nanoparticle System Using Surface Forces Analysis: Contribution of DLVO versus Non-DLVO Interactions. *Industrial & Engineering Chemistry Research* 2018, 57, (43), 14482-14492.
- Bazyari, A.; Soulgani, B. S.; Jamialahmadi, M.; **Dehghan Monfared, A.**; Zeinijahromi, A., Performance of Smart Water in Clay-Rich Sandstones: Experimental and Theoretical Analysis. *Energy & Fuels* 2018, 32, (10), 10354-10366.
- Parvizi, H.; Rezaei Gomari, S.; Nabhani, F.; **Dehghan Monfared, A.** Modeling the Risk of Commercial Failure for Hydraulic Fracturing Projects Due to Reservoir Heterogeneity. *Energies* 2018, 11, (1), 218.
- **Dehghan Monfared A.**, Ghazanfari M. H., Jamialahmadi M., Helalizadeh A., Potential Application of Silica Nanoparticles for Wettability Alteration of Oil–

Wet Calcite: A Mechanistic Study. Energy & Fuels 2016, 30 (5), 3947-3961.

- **Dehghan Monfared A.**; Ghazanfari M. H., Jamialahmadi M., Helalizadeh A., Adsorption of silica nanoparticles onto calcite: Equilibrium, kinetic, thermodynamic and DLVO analysis, Chemical Engineering Journal, 281 2015 334-344.
- **Dehghan Monfared A.**; Helalizadeh A., Parvizi H.; Zobeidi K., A Global Optimization Technique Using Gradient Information for History Matching, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects 2014, 36:13, 1414-1428
- **Dehghan Monfared A.**; Helalizadeh A.; Parvizi H.; Automatic History Matching Using the Integration of Response Surface Modeling with a Genetic Algorithm, Petroleum Science and Technology 2012, 30:4, 360-374

ACADEMIC ACTIVITIES:

WORKING EXPERIENCES:

- **Member of Faculty** (since 2016, Faculty of Petroleum, Gas and Petrochemical Engineering, Persian Gulf University, Bushehr, Iran)
- **Head of Petroleum Engineering Department** (since 2017, Faculty of Petroleum, Gas and Petrochemical Engineering, Persian Gulf University, Bushehr, Iran)

TEACHING EXPERIENCES:

Persian Gulf University, Bushehr, Iran (2016-present)

Graduate Courses:

Advanced Well Test Analysis, Advanced Enhanced Oil Recovery, Advanced Production Engineering.

Undergraduate Courses:

Reservoir Rock Properties, Reservoir Fluid Properties, Fundamentals of Petroleum Engineering, Numerical Mathematics.

Islamic Azad University, Bushehr, Iran (2012-2014)

Undergraduate Courses:

Reservoir Rock Properties, Reservoir Fluid Properties, Reservoir Engineering I, Reservoir Engineering II, Drilling Engineering I, Two Phase Fluid Mechanics, Fundamental of Petroleum Processes, Fundamentals of Petroleum Engineering, Enhanced Oil Recovery.

SEMINAR/PRESENTATION EXPERIENCES:

- 2009** Workshop (Teaching Software) : “Reservoir Simulation; Eclipse 100 and PVTi ” Held by Ahwaz SPE Chapter, Petroleum University of Technology, Ahwaz, Iran
- 2010** Presentation of a Seminar Entitled “Application of Automatic History Matching Techniques in Reservoir Simulation” Held by National Iranian South Oil Company (NISOC), Ahwaz, Iran.
- 2016** Workshop (Teaching Software) : “Reservoir Simulation; Eclipse 100 ” Held by Scientific Association, Sharif University of Technology, Tehran, Iran

SERVING AS A JOURNAL REVIEWER:

- Journal of Petroleum Science and Engineering, Elsevier
 - Journal of Natural Gas Science & Engineering, Elsevier
 - Energy & Fuel, ACS
 - Colloids and Surfaces A: Physicochemical and Engineering Aspects, Elsevier
 - Journal of Rock Mechanics and Geotechnical Engineering, Elsevier
- Qualified as **Outstanding Reviewer**, Elsevier, 2018

OTHER EXPERIENCES:

- Summer 2005** Job Training: MAROON Production Operation Unit, National Iranian South Oil Company (NISOC), Ahwaz, Iran.
- Summer 2006** Job Training: Khark island, Khark Oil Terminal, Education Center, Bushehr, Iran.

RESEARCHES:

RESEARCH INTERESTS:

- Enhanced Oil Recovery.
- Reservoir Rock and Fluid Characterization (Experiment and Modeling Approaches)
- Reservoir Modeling and Simulation
- Nanotechnology for Upstream Petroleum Industry
- Optimization and Computer Assisted History Matching
- Surface/Interface Phenomena Studies in Petroleum Engineering

INDUSTRIAL RESEARCHES:

- Field Study Research Project for Kish Gas Field, Contribution as Executive Fellow of Research Project

ACADEMIC RESEARCHES:

- Reservoir Characterization by Sequential indicator Simulation (SIS) And Sequential Gaussian Simulation (SGS).
- Simulation of PVT Studies (Experiments, Phase Behavior Diagram etc.).
- Simulation of Water Flooding Process – Black Oil Model.
- Simulation of Gas Production from Gas Condensate Reservoir.
- History Matching of Reservoir Simulation.
- Experimental Work on Silica Nanoparticles-Carbonate Rocks Interaction

COMPUTER SKILLS:

- Petroleum Reservoir Simulator Modulus; ECLIPSE 100 & 300, PVTi, FloGrid.
- Petrel RE, Reservoir Simulation Software
- IHS Fekete Well Test Software
- MEPO (history matching software)
- MATLAB.
- C# & C++
- Artificial Intelligence.
- Microsoft Office Package & Windows Operating System.