

دکتر رضا فلاحات

دانشیار

دانشکده: مهندسی نفت و گاز



## Dr. Reza Falahat

- Associate Professor of Petroleum Engineering, Sahand University of Technology, Tabriz, Iran, (2015-present)
- Project Director for NIOC-EXP, IOOC and POGC (2016-present)
- Advisor for Variety of oil and gas companies (2016-present)

### Education

- Ph.D: Heriot-Watt University of United Kingdom (Reservoir Geophysics) (2011)
- Ms.c: Sahand University of Technology of Tabriz (Natural resource exploration) (2004)
- BSc Degree: Sahand University of Technology of Tabriz (Natural resource exploration) (2001)

### Technical Skills

- 4D and 3D seismic interpretation
- Rock and fluid physics
- Petroleum Geophysics
- Reserve Estimation and Auditing
- Reservoir Modelling
- Well-Logging

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سوابق تحصیلی			
مقطع تحصیلی	سال اخذ مدرک	رشته و گرایش تحصیلی	دانشگاه
کارشناسی	۲۰۰۱	Natural resource exploration	Sahand University of Technology
کارشناسی ارشد	۲۰۰۴	Natural resource exploration	Sahand University of Technology
دکتری	۲۰۱۱	Reservoir Geophysics, Institute of Petroleum Engineering	Heriot-Watt University

اطلاعات استخدامی				
محل خدمت	عنوان سمت	نوع استخدام	نوع همکاری	پایه
تبریز	دانشیار دانشکده مهندسی نفت و گاز	رسمی قطعی	تمام وقت	

### سوابق اجرایی

- Sahand University of Technology, Tabriz, Iran, Associate Professor of Petroleum Engineering (2015-present)
- Project Director for NIOC-EXP, IOOC and POGC (2016-present)
- Advisor for Variety of oil and gas companies (2016-present)
- Nargan Amiris Energy Development, Director of Subsurface Services, and Head of Geophysics Department (2016-2018)
- ERC Equipoise, London, UK, Senior Consultant Geophysicist and ERCE's representative in Iran (2016-2018)
- ERC Equipoise, London, UK, Senior Reservoir Geophysicist (2012-2016)
- Imperial College, London, UK, Supervisor of Post Graduate Students (2014-2015)
- Heriot-Watt University, Edinburgh, UK, Team Leader and Reserach Associate (2011-2012)
- Sahand University of Technology, Tabriz, Iran, Lecturer (2004-2008)

### جوایز و تقدیر نامه ها

- Best Technologist at Sahand University of Technology, 2023
- Selected as one of the **Best Applied Researchers in the country (Iran) in the area of industry relations (within the highest amount of contract with industry)**, 2022

- Selected as one of the **Best Project Director in the country (Iran)**. My project was within the best selected projects in the country, 2021
- Distinguished Applied Researcher at Sahand University of Technology (in industry relations), and the winner of the best project at the university, 2021 and 2022
- Best Researcher at Sahand University of Technology (the highest amount of contracts with oil and gas companies), 2020
- EAGE, SEG, Thomsen/BP award, 2010-2011
- First class honours – first rank in the university during MSc and BSc periods

## موضوعات تدریس تخصصی

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- Seismic Interpretation
- Reservoir Modelling
- Rock Physics
- Reservoir Monitoring Using 4D Seismic Data
- Well Logging

## مقالات در همایش ها

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1. Shiri S. and Falahat R, Rock Physics Modelling and 4D Seismic Feasibility Study in one of the Iranian Carbonate Reservoirs ,81st EAGE Conference and Exhibition ,2019
2. Mehdi Sadeghi., Navid Amini, Reza Falahat, Hamid Sabeti, Nasser Mandani ,3D Acoustic Impedance Modeling using Turning Bands Co-Simulation and Linear Multi-Attribute Transform ,81st EAGE Conference and Exhibition ,2019
3. Falahat R ,The reservoir scale gas distribution and its accurate seismic response ,18th conference of Geophysics ,2018
4. Haghshenas Sh., Falahat R. and Simjoo M ,Evaluation of Different Rock Physics Models to calculate Dry Rock Modulus in one of the Iranian Southern Oil Reservoirs ,18th conference of Geophysics ,2018
5. Falahat R., McQuaid S ,Nodal Inversion: An Optimisation Algorithm to Reduce the Run Time during the Seismic Inversion ,AAPG/SEG International Conference and Exhibition ,2017
6. Falahat R., MacBeth C., and Shams A ,A practical 4D seismic attribute to estimate saturation and pressure changes arising from reservoir production and injection ,Second National Conference on Petroleum Geomechanics ,2017
7. Falahat R ,Seismic Interpretation: How Quantitative We Can Be? ,17 Conference of Geophysics ,2016
8. Falahat R., Shams A. and MacBeth C ,An interpretation of the 4D seismic response to gas exsolution and dissolution ,, 75th EAGE Conference and Exhibition ,2013
9. MacBeth C., Huang Y. and Falahat R ,4D Seismic Interpretation with Frequently Acquired, Multiple Time-lapsed Surveys ,Second EAGE Workshop on Permanent Reservoir Monitoring ,2013

- Falahat R., Shams A. and MacBeth C ,Adaptive engineering-based scaling for enhanced .10  
dynamic interpretation of 4D seismic ,73rd EAGE Conference ,2011
- Falahat R., Shams A. and MacBeth C ,Towards quantitative evaluation of gas injection using .11  
time–lapse seismic ,72nd EAGE Conference ,2010

## مقالات در نشریات

- Behzad Nasrnia, Reza Falahat,Introducing a Simplified Rock Physics Model to Estimate Shear .1  
Velocity to Consider the Geometry of Pore Spaces and Minerals,Journal of Acta  
Geophysica,2024
- Saghi Jalini, Reza Falahat,Feasibility Study of Monitoring of Water Injection into an Iranian Oil .2  
Fields Using 4D Seismic Data,Journal of Petroleum Research,2024
- Behzad Nasrnia, Reza Falahat, Ali Kadkhodaie,Log-based estimation of magnitude, azimuth .3  
and causes of anisotropy using a committee machine-based model,Journal of Earth Science  
Informatics,2024
- Behzad Nasrnia, Reza Falahat, Ali Kadkhodaie, Ali Gholami Vijouyeh,A committee machine- .4  
based estimation of shear velocity log by combining intelligent systems and rock-physics model  
.using metaheuristic algorithms,Journal of Engineering Application of Artificial Intelligence,2023
- Esmael Makarian, Maryam Mirhashemi, Ayub Elyasi, Danial Mansourian, Reza Falahat, Ahmed .5  
E. Radwan, Ahmed El ,& Aal, Cunhui Fan, Hu Li,, A Novel Directional-Oriented Method for  
Predicting Shear Wave Velocity Through Empirical Rock Physics Relationship Using Geostatistics  
Analysis,Journal of Scientific Reports,2023
- Aboulfazl Pourhassan Heris, Reza Falahat,Pore pressure estimation of one of the gas fields in .6  
southwestern Iran using well log and seismic data,Journal of Petroleum Research,2023
- Saghi Jalini, Reza Falahat,Analyzing of Rock Physics Models for 3D and 4D Seismic Feasibility .7  
Study in the Carbonate Reservoirs and Developing an Hybrid Algorithm,resech square,2023
- MohammadHossein GhojehBeyglou1, Reza Falahat and Enayatollah Ranjineh Khojasteh,A .8  
Geostatistical analysis approach for facies and porosity modeling of a heterogeneous sandstone  
reservoir to compare four practical stochastic methods,Journal of Applied and Regional Geology  
(ZDGG),2022
- Hassan Bagheri and Reza Falahat,Fracture permeability estimation utilizing conventional well .9  
logs and flow zone indicator,Journal of Petroleum Research,2021
- Mehdi Sadeghi, Navid Amini, Reza Falahat, Hamid Sabeti and Nasser Madani,Global .10  
stochastic seismic inversion using turning bands simulation and co-simulation,Journal of Acta  
Geophysica,2021
- Ahsan Leisi and Reza Falahat,Investigation of Some Porosity Estimation Methods Using .11  
Seismic Data in One of the South Iranian oil fields,Journal of Petroleum Research,2021
- Medi sadeghi, Navid Amini, Reza Falahat, Naser Madani and Hamid Sabeti,3D Acoustic .12  
impedance modeling using turning bands simulation method in an oil field in SW of Iran,Journal  
of Geophysics,2021
- Mehdi Sadeghi, Nasser Madani, Reza Falahat, Hamid Sabeti and, Navid Amini,Hierarchical .13  
reservoir lithofacies and acoustic impedance simulation: Application to an oil field in SW of  
Iran,Journal of Petroleum Science and Engineering,2021
- Dalvand M. and Falahat R,A New Rock Physics Model to Estimate Shear Velocity Log,Journal .14  
of Petroleum Science and Engineering,2020
- Falahat, R., and Farokhnia, F,Rock physics modelling of the carbonate reservoirs: A log-based .15  
algorithm to determine the pore aspect ratio,Journal of Applied Geophysics,2020
- Hamed Amraei and Reza Falahat,Improved ST-FZI Method for Permeability Estimation to .16  
Include the Impact of Porosity Type and Lithology,Journal of Petroleum Exploration and  
Production Technology,2020

- Jalini S. and Falahat R, A Novel Algorithm to Estimate Mineral Elastic Properties and Pore .17  
 Aspect Ratio in the Carbonate Reservoirs, Journal of Applied Geophysics, 2020
- Taghizadeh M., Falahat R. and Tabatabaei, & Nejad A, Geomechanical modeling for CO<sub>2</sub> .18  
 geologic sequestration in Asmari reservoir– South of Iran, Arabian Journal of Geosciences, 2019
- Cheraghsahar E., Falahat R. and Tabatabaei, & Nejad A, Geomechanical impacts of Reservoir .19  
 Pressure and Temperature changes on the Wellbore Stability, Journal of Petroleum  
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 Iranian Carbonate Reservoirs, Journal of Applied Geophysics, 2019
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 storage and enhanced oil recovery purposes, Journal of Geophysics, Iran, 2018
- Falahat R., MacBeth C., and Shams A, A practical 4D seismic attribute to estimate saturation .22  
 and pressure changes arising from reservoir production and injection, Journal of Petroleum  
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- Falahat R., Obidegwu D., Shams A. and MacBeth C, The interpretation of amplitude changes .23  
 in 4D seismic data arising from gas exsolution and dissolution, Petroleum Geoscience, 2014
- Falahat R., Shams A. and MacBeth C, Adaptive scaling for enhanced dynamic interpretation .24  
 of 4D seismic data, Geophysical prospecting, 2013
- Falahat R., Shams A. and MacBeth C, Towards quantitative evaluation of gas injection using .25  
 time–lapse seismic, Geophysical prospecting, 2011
- Mohammadzade M. J. and Falahat R, Application of ETM satellite images in enhancement of .26  
 alteration halos and lithological units discrimination in Mianeh-East Azerbaijan, Journal of  
 Crystallography and Mineralogy, 2007
- Mohammadzade M. J. and Falahat R, Analysis and integration of airborne geophysical data .27  
 and their correlation with ETM image for detecting alteration zones in Mianeh (East  
 Azerbaijan), Journal of Geosciences, 2005