

Dr Abdolnabi Hashemi

BSc, MSc, MPhil, PhD, PE

Associate Prof. of Petroleum Engineering

Ahwaz Faculty of Petroleum Engineering, Petroleum University of Technology,
Ahwaz, Iran

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Personal Detail:

- DOB: 06 May 1968
- Married with two children

Academic Careers:

Petroleum University of Technology,

- Associate Professor of Petroleum Engineering 2014-date
- Chancellor, Petroleum University of Technology, July 2014- January 2018
- Director in Charge: Iranian Journal of Oil & Gas Science and Technology; 2014-date
- Member of Board of Research Institute of Petroleum University Industry (RIPI); 2014- date
- Dean of Tehran Faculty of Petroleum (2012-2014)
- Director of Petroleum Engineering Department- Ahwaz Faculty of Petroleum (2010-2012)
- Associate Professor of Petroleum Engineering; 2006-2014

Industrial Careers

National Iranian Oil Company (N.I.O.C.)

- North Drilling Company, Technical Adviser, 2008-2014
- Head Directional and Horizontal Drilling Department (National Iranian Drilling Company): 2002
- Drilling Programs Project Leader: 1996- 2000
- Senior Drilling Engineer: 1995
- Wellsite Superintendent (Company Man): 1992-1994
- Drilling Trainee: 1992

Phillips Petroleum Company, Woking, UK, 2001

- Cooperated in reservoir study of a gas condensate field, as a part of MSc degree completion

Education

- PhD in Petroleum Engineering, Imperial College London, UK. Dec. 2002-April 2006; PhD Thesis subject:
- MSc in Petroleum Engineering (With Distinction Grade), Imperial College London, UK, 2000-2001;
- BSc in Chemical Engineering, (Petroleum Resource Production), Petroleum University of Technology, Ahwaz, Iran, Oct. 1987- March 1992;

Honors and Awards:

- NIOC full Scholarship for BSc in Petroleum Engineering at PUT (1987-1992)
- NIOC full Scholarship for MSc in Petroleum Engineering at Imperial College London (2000-2001)
- Distinction in MSc studies, Imperial College London, UK (2000-2001)
- Imperial College London, full Scholarship for PhD in Petroleum Engineering (2002-2006)

International Teaching Experiences

Advanced Drilling Engineering

Course Designed for MSc Program, Heriot Watt & Sharif Universities Dual Degree Joint Program, Tehran, Fall 2006:

Advanced Drilling Engineering

Course designed for MSc Program, Curtin & PUT Universities Dual Degree Joint Program, Tehran, Spring 2007

Advanced Well Test Analysis

Visiting Professor, Course designed for MSc Program, Montan University Leoben, Austria, June 2016, and July 2017

Joint Industry Projects

Directing 6 Academic-Industry Joint Research Projects funded by NIOC:

1. Optimization of Balal oil Production Using Integrated Network Modeling by Commercial Software, Sponsored by Iranian Offshore Oil Company, October 2018-September 2019
2. Feasibility Study of Gas Recycling in Naturally Fractured Gas Condensate Reservoirs – South Zagros: Sponsored by: Iranian Central Field Oil Company, February 2008-2010
3. Use of Deconvolution for Analyzing Transient Pressure Tests: Sponsored by NIOC Research and Technology, May2008-2010
4. Basic Studies of Behavior of Iranian Giant Gas- Condensate Reservoirs and Determination of the Optimum Recovery Scenario for each Field Based on Its Specific Rock and Fluid Properties- Phase 1: Evaluation of Pressure Transient and Flow Tests in South Pars Field Using New Analytical and Numerical Models. Sponsored by NIOC Research and Technology, September 2008-2010,
5. Integrated Study of Stuck Pipes Phenomenon in Directional and Horizontal Wells In Ahwaz, Ab-Teymoor and Mansouri Oil Fields and Suggest an Optimum Plan, Sponsored By NISOC, September 2010-February 2013
6. Evaluation of Condensate Drop-out and Its Effects on Hydrocarbon Recovery in Kish Gas Field and Techno-Economical Study of Optimum EOR Method (Including: Fluid Injection, i.e. Water, Hydrocarbon and Non-Hydrocarbon Gases, into the Field or Horizontal Wells etc and Developing a Two-Phase Pseudo Pressure Software.Sponsored by PEDEC, July 2011-July 2013

Professional Skills:

- Drilling Engineering and well design, Drilling Optimization, Drilling Fluids and Hydraulics, Pressure transient analysis, Reservoir Engineering and simulation, Compositional modelling, Directional and horizontal drilling

- Involved and supervision of drilling programs and operation of more than 500 oil or gas wells in south of Iran during more than 10 years experiences in rig-sites and engineering offices
- Expertise in well design and directional and horizontal drilling
- Well test analysis and reservoir simulation of a relatively big gas-condensate field which is developed by several horizontal wells, Gaz de France and Imperial College (Joint Industry Project)
- Study and simulation of Maureen filed in North Sea (Imperial College London, MSc group project)
- Well test analysis and reservoir simulation of Jade field UKCNS, Phillips Petroleum Company, MSc individual project

Publications

Journal Papers

1. Vahid Nooripoor and Abdolnabi Hashemi; "Effect of a modified nano clay and nano graphene on rheology, stability of water-in-oil emulsion, and filtration control ability of oil-based drilling fluids: a comparative experimental approach" Oil & Gas Science and Technology – Rev. IFP Energies nouvelles 75, 40 (2020),
<https://doi.org/10.2516/ogst/2020032>
2. Seyed Moein Hosseini, Shahin Kord, and Abdolnabi Hashemi,; " **Mechanistic Modeling of Low Salinity Water Injection under Fracturing Condition in Carbonate Reservoirs: Coupled Geochemical and Geomechanical Simulation Study**", **SPE-192038-MS**, SPE Asia Pacific Oil & Gas Conference and Exhibition held in Brisbane, Australia, 23–25 October 2018
3. Seyed Shahram Khalilnezhad · Abdolnabi Hashemi et al. "**Experimental Analysis and Numerical Modeling of Polymer Flooding**" Arabian Journal for Science and Engineering (2019) 44:10447–10465
4. **in Heavy Oil Recovery Enhancement: A Pore-Level Investigation"**
5. Babak Ravaji, Sohrab Mashadizadeh and Abdolnabi Hashemi; " **Introducing optimized validated meshing system for wellbore stability analysis using 3D finite element method**" Journal of Natural Gas Science and Engineering, 53 (2018) 74–82, March 2018
6. Farzad Hajibagheri , Abdolnabi Hashemi , Mostafa Lashkarbolooki, Shahab Ayatollahi; **Investigating the synergic effects of chemical surfactant (SDBS) and biosurfactant produced by bacterium (Enterobacter cloacae) on IFT reduction and wettability alteration during MEOR process"** Journal of Molecular Liquids, 256 (2018) 277–285. Feb. 2018
7. Puyan bakhshi, Riyaz Kharrat, Abdolnabi Hashemi and Mehdi Zalaghi, **Experimental evaluation of carbonated waterflooding: A practical process for enhanced oil recovery and geological CO₂ storage"** Greenhouse Science Society and Technology, 0:1-19, September 2017
8. Alireza Rostami, Abdolnabi Hashemi, Mohammad Ali Takassi, Amin Zadehnazari; **"Experimental assessment of a lysine derivative surfactant for enhanced oil recovery in carbonate rocks: Mechanistic and core displacement analysis"** Journal of Molecular Liquids, 232 (2017) 310–318, Elsevier, Jan 2017
9. Kambiz Razminia, Abolhassan Razminia and Abdolnabi Hashemi **"Fractional-calculus-based formulation of the fractured wells in fractal radial composite reservoir"**; Environ Earth Science, ,Oct 2016, Sci (2016) 75:1436
10. S. Mahmoudi, O. Mohammadzadeh, A. Hashemi & S. Kord; **"Pore-scale numerical modeling of relative permeability curves for CO₂–oil fluid system with an application in immiscible CO₂ flooding"**; Journal of Petroleum Exploration and Production Technology, May 2016

11. Mohammad Ali Takassi, Abdolnabi Hashemi, Alireza Rostami & Amin Zadehnazar; **"A lysine amino acid-based surfactant: Application in enhanced oil recovery"** Petroleum Science and Technology, 34:17-18, 1521-1526, September 2016
12. E. Nikjoo, A. J. Al-Khalifa, A. Hashemi & A. Jahanbakhsh; **"Investigation of non-uniform saturation distribution effects on the interpretation of pressure and pressure derivative curves"**, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 38:2, 155-163; Jan 2016
13. Farzad Hajibagheri, Mostafa Lashkarbolooki, Shahab Ayatollahi and Abdolnabi Hashemi; **"The synergic effects of anionic and cationic chemical surfactants, and bacterial solution on wettability alteration of carbonate rock: An experimental investigation"** Colloids and Surfaces A: Physicochem. Eng. Aspects 513 (2017) 422–429, Elsevier, Nov. 2016
14. Saeed Parvizi, Riyaz Kharrat, Mohammad R. Asef and Abdolnabi Hashemi **"Prediction of the Shear Wave Velocity from Compressional Wave Velocity for Gachsaran Formation"** Acta Geophysica, vol. 63, no. 5, Oct. 2015, pp. 1231-1243
15. E. Nikjoo, A. Hashemi, A. Jahanbakhsh & E. Motaei; **"The Influence of Multiphase Flow on the Interpretation of Pressure Transient Data in Multilayer Reservoirs With Cross Flow"** Petroleum Science and Technology, Dec 2015 33:21-22, 1837-1845,
16. E. Sheikhi, A. Hashemi and A. Kaffash, **"Effect of Non-Darcy Flow Coefficient Variation Due to Water Vaporization on Well /Productivity of Gas Condensate Reservoirs"**; Brazilian Journal of Chemical Engineering; Vol. 32, No. 01, pp. 237 - 245, January - March, 2015
17. M. safari and A. Hashemi **"Condensate blockage effects in well test analysis of dual porosity/dual-permeability, naturally fractured gas condensate reservoirs: a simulation approach"** Journal of Petroleum Exploration and Production Technology, October 2015
18. K. Razminia, A. Hashemi, A. Razminia, and D. Baleanu **"Explicit Deconvolution of Well Test Data Dominated by Wellbore Storage"** journal of Abstract and Applied Analysis, Volume 2014, Article ID 912395, 12 page
19. M. Ahmadi, M. Sharifi & A. Hashemi **"Comparison of Simulation Methods in Gas Condensate Reservoirs"** journal of Petroleum Science and Technology, 32:761–771, 2014
20. S. Mahmoudi, A. Hashemi and Sh. Kord **"Gas-liquid Relative Permeability Estimation in 2D Porous Media by Lattice Boltzmann Method: Low Viscosity Ratio 2D LBM Relative Permeability"**, Iranian Journal of Oil & Gas Science and Technology, Vol. 2 (2013), No. 2, pp. 34-49
21. K. Razminia, A. Hashemi and A. Razminia **"A Least Squares Approach to Estimating the Average Reservoir Pressure"** Iranian Journal of Oil & Gas Science and Technology, Vol. 2 (2013), No. 1, pp. 22-32
22. A. Rabiei, M. A. Niazi, A. Hashemi & S. Ayatollahi **"Core flooding tests to investigate the effects of IFT reduction and wettability alteration on oil recovery during MEOR process in an Iranian oil reservoir"** Journal of Applied Microbiology and Biotechnology, April 2013
23. Arash Yazdanpanah and Abdolnabi Hashemi, **"Production Optimization Using an Experimental Design and Genetic Algorithm"** ; Journal of American Science, 2012;8(11), P. 629-634
24. E. Nikjoo and A. Hashemi, **"Effects of Non-Uniform Fluid Saturation Distribution on Pressure Transient Analysis"**, Journal of Petroleum Exploration and Production Technology (2012) 2:141-14
25. . Ali Heydarian, Riyaz Kharrat, Abdolnabi Hashemi; **The Impact of Sparkling Mechanism on Improving Oil Recovery in Nano-Particle Injection through Pseudo- 3-Dimensional Micromodels**; Journal of American Science, 2012;8(11), P. 379-384
26. K. N. Korrani, S. Gerami, C. Ghotbi and A. Hashemi; **Investigation on the Importance of the Diffusion Process During Lean Gas Injection Into a Simple Synthetic Depleted Naturally Fractured Gas Condensate Reservoir**; Journal of Petroleum Science and Technology, 30:655–671, 2012
27. M. K. Foroutan and A. Hashemi, **"The Prediction of Surge and Swab Pressures and Critical Pipe Running Speed While Tripping in a 12 1/4-in. Hole (Gachsaran Formation) of Maroun Field in Iran"** ; Journal of Petroleum Science and Technology; 29:601–612, 2011

28. G.H. Montazeri, Z. Ziabaksh, M. Haghighi, A. Hashemi; **"The Effects of Richness, Relative Permeability Curves, and Skin in Well Test Analysis of Gas Condensate Reservoirs"** Journal of Petroleum Science and Technology; 28:1358-1372, 2011
29. S. Edalatkhah; R. Rasoul ; A. Hashemi **"Bit Selection Optimization Using Artificial Intelligence Systems"** Journal of Petroleum Science and Technology, 28:1946–1956, 2010
30. M. Qassamipour A. Hashemi: **Mechanisms of Liquid Buildup in Gas Condensate Reservoirs;** Petroleum Science and Technology, 29:2425–2431, 2011
31. H. Rahimzadeh, M. Mostofi, and A. Hashemi, : **A New Method for Determining Bourgoyne and Young Penetration Rate Model Constants;** Petroleum Science and Technology, 29:886–897, 2011
32. M. Beidokhti R. Arabjamaloei , A. Hashemi , S. Edalatkhah M. Nabaei, R. Malakooti and E. Jamshidi; : **Dealing With the Challenges of the Rate- Dependent Skin Phenomenon in a Gas Condensate Reservoir: A Simulation Approach;** Petroleum Science and Technology, 29:2177–2190, 2011
33. 16. A. Hashemi and A. C. Gringarten: **"Well Test Analysis of Horizontal Wells in Gas-Condensate Reservoirs"** SPE Reservoir Engineering and Evaluation journal Feb. 2006

International Conferences

1. Abdolnabi Hashemi, "A Review on the Best Practices in Hydraulic Fracturing and Their Risk Assessment", presentation as a keynote speaker at the 21th World Petroleum Congress, Moscow-2014
2. Ehsan Nikjoo and Abdolnabi Hashemi, "Pressure Transient Analysis in Multiphase Multi Layer Reservoirs with Inter Layer Communication, Paper SPE 152838, presented at the EAGE Annual Conference & Exhibition incorporating SPE Europec held in Copenhagen, Denmark, 4–7 June 2012.
3. H. Rahimzadeh, A. Hashemi and K. Salahshoor, "Comparison of the Penetration Rate Models Using Field Data for One of the Gas Fields in Persian Gulf Area, Paper SPE 131253, presented at CPS/SPE International Oil & Gas Conference and Exhibition in China held in Beijing, China, 8–10 June 2010
4. S. Ghorbani M. Masihi & A. Hashemi: "Utilization of Percolation Theory to Evaluate Conductivity of Fractured Reservoirs-Effect of Fracture Correlation Length on Universality" paper presented 72nd EAGE Conference & Exhibition incorporating SPE EUROPEC 2010, Barcelona, Spain, 14 - 17 June 2010
5. Kazemi Nia, Shahab Gerami, S. Ghotbi and A. Hashemi : "Compositional modeling of Molecular Diffusion in Natural Gas Injection of Tight Gas Fractured Reservoirs – Single Block Approach", Paper presented at 6th International Chemical Engineering Conference, Kish Island, 2009
6. Kazemi Nia, Shahab Gerami, S. Ghotbi and Abdolnabi Hashemi: "Compositional modeling of Multi- mechanistic flow in Natural Gas Injection of Tight Gas Fractured Reservoirs – Single Block Approach" Paper presented at 6th International Chemical Engineering Conference, Kish Island, 2009
7. S. Ghorbani M. Masihi & A. Hashemi: "Effect of Average Intersection Per Line on Connectivity in Fractured Reservoir, Using Percolation Theory" paper presented at the 71st EAGE Conference & Exhibition — Amsterdam, The Netherlands, 8 - 11 June 2009
8. A. Gholami & A. Hashemi: "The Impact of Gas Composition on the Intensity of Positive Coupling Effect in Gas Condensate Reservoir", Paper presented at 2009- Shiraz EAGE 1st International Petroleum Conference, 4-6 May 2009

9. Y. Mahmoodi , R. Kharrat & A. Hashemi:" Study of Thermally Assisted Gas Oil Gravity Drainage in one of Iranian Fractured Reservoirs", Paper presented at 2009- Shiraz EAGE 1st International Petroleum Conference, 4-6 May 2009
10. A. Hashemi, M. Sadooni and H. Parvizi "Analysis of Capillary Number Effects on Gas Condensate Reservoir Performance Based on an Iranian Gas-Condensate Reservoir Data" paper presented at the Gas Field Development and Processing Symposium, 27-29 October 2008 Kuwait.
11. M. Sadooni, K. Shahbazi, A. Hashemi, and M. R. Abdali "Evaluation of Gas, Water, WAG Injections, and Infill Wells for Improving Recovery of One of Iranian Reservoirs" paper SPE 116912, presented at the 2008 Abu Dhabi International Petroleum Exhibition and Conference held in Abu Dhabi, UAE, 3-6 November 2008.
12. A. Hashemi and Alain C. Gringarten: "Comparison of Well Productivity between Vertical, Horizontal and Hydraulically Fractured Wells in Gas-Condensate Reservoirs," Paper SPE 94178 presented at the 14th Europec Biennial Conference held in Madrid, Spain, 13-16 June 2005
13. A. Hashemi, A. C. Gringarten and L. Nicolas,: "Well Test Analysis of Horizontal Wells in Gas- Condensate Reservoirs" Paper SPE 89905, Presented at the 2004 SPE Annual Technical Conference and Exhibition, Houston, Texas, 26-29 September
14. A. C. Gringarten, A. Hashemi et al.: Well Teat analysis in Low Permeability Multilateral wells," paper SPE 10686 presented at the International Petroleum Conference, Doha, Qatar, 21-23 November 2005
15. A.C. Gringarten, A. Hashemi and M. Bozorgzadeh, S. Daungkaew: "Well Test Analysis in Gas Condensate Reservoirs: Theory and Practice," paper SPE 10685 presented at the International Petroleum Conference, Doha, Qatar, 21-23 November 2005
16. Abdolnabi Hashemi: "Multilateral Wells- A Driller's Dream & Reservoir Engineer's Nightmare – or Vice-Versa?" a scribe's report of the SPE Applied Technology Workshop, 1-3 December 2004, Harrington Hall, London, UK

۱. وحیدنوری پور و عبدالنبی هاشمی، "مروری بر پتانسیل
رسهای اصلاح سطحی شده در جهت تامین خصوصیات رئولوژیکی سیالات حفاری پایه نفتی" ماهنامه علمی اکتشاف و تولید نفت و گاز | شماره ۱۷۷
مرداد ۹۹
۲. پوریا مال میر، عبدالنبی هاشمی و بهرام سلطانی سولگانی، "بررسی آزمایشگاهی تزریق پلیمر بر ازدیاد برداشت از مخازن نفت سنگین و تعیین
غلظت بهینه تزریق" مجله پژوهش نفت شماره ۱۰۶ و مرداد و شهریور ۱۳۹۸، صفحات ۲۰ تا ۳۱
۳. یاسر رضایی، عبدالنبی هاشمی، دکتر عبدالمجید موحدی نیا: آسیب های زیست محیطی ناشی از حفاری فراتعادلی در مقایسه با حفاری
فروتعادلی در یکی از میادین نفتی ایران، اولین کنفرانس بین المللی نفت، گاز، پتروشیمی و نیروگاهی، تهران، ۳۰ خرداد ۹۰
۴. یاسر رضایی، عبدالنبی هاشمی، دکتر عبدالمجید موحدی نیا: روشهای حفظ فشار به صورت یکنواخت در حفاری فروتعادلی، اولین
کنفرانس بین المللی نفت، گاز، پتروشیمی و نیروگاهی، تهران، ۳۰ خرداد ۹۰
۵. آرش ربیعی، میلادشریفی نیک، عبدالنبی هاشمی، علی نیازی و سید شهاب الدین آیت الهی: بررسی آزمایشگاهی استفاده از میکروآرگانیسم ها
در ازدیاد برداشت از مخازن نفتی ایران با شوری متوسط، اولین کنفرانس بین المللی نفت، گاز، پتروشیمی و نیروگاهی، تهران، ۳۰ خرداد ۹۰
۶. میلادشریفی نیک، آرش ربیعی، عبدالنبی هاشمی، علی نیازی، پگاه صراف زاده و سید شهاب الدین آیت الهی: بررسی آزمایشگاهی تاثیر دما
بر میکروآرگانیسم ها در ازدیاد برداشت از مخازن نفتی ایران به روش میکربی، اولین کنفرانس بین المللی نفت، گاز، پتروشیمی و نیروگاهی،
تهران، ۳۰ خرداد ۹۰
۷. موسوی، هاشمی، مرادی و مسیحی: "شبیه سازی تزریق متناوب آب و گاز در یکی از مخازن نفتی ایران"، همایش ملی مهندسی شیمی،
دانشگاه آزاد اسلامی واحد اسلامشهر اسفند ۸۸
۸. موسوی، هاشمی، مرادی و مسیحی: " اثرات زیست محیطی گازهای تولیدی همراه نفت و ارایه راهکارهایی برای جلوگیری از اثرات
مخرب آن"، همایش ملی مهندسی شیمی، دانشگاه آزاد اسلامی واحد اسلامشهر اسفند ۸۸
۹. موسوی، هاشمی، مرادی و مسیحی: "روشهای ازدیاد برداشت و کارایی آن در مخازن ایران"، همایش ملی مهندسی شیمی، دانشگاه
آزاد اسلامی واحد اسلامشهر اسفند ۸۸

۱۰. سید عبدالزمان رضوی و عبدالنبی هاشمی: بهینه سازی چاههای کم فشار نفتی یکی از مخازن جنوب با استفاده از پمپ های درون چاهی، مجله اکتشاف تولید، شماره ۷۰ و ص ۴۹-۵۳، مرداد ۸۹