

ABDULLAH ALAJMI - RESUME

□ **PERSONAL INFORMATION**

- Name: Abdullah F. F. Alajmi
- Mailing Address: P.O. Box 5969
13060 Safat, Kuwait
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□ **ACADEMIC QUALIFICATIONS**

- Ph. D. in Petroleum and Natural Gas Engineering – The Pennsylvania State University, PA, USA 2003.
- M. Sc. in Petroleum and Natural Gas Engineering - The Pennsylvania State University, PA, USA 1999.
- B. Sc. in Petroleum Engineering – Marietta College, OH, USA 1995.

□ **RESEARCH INTERESTS**

- Multi-Phase Flow in Porous Media.
- Enhance Oil Recovery.
- Numerical Reservoir Simulation.
- Imaging and analyzing fluid flow in porous media using quantitative X-ray CT.

□ **PROFESSIONAL EXPERIENCES**

- Acting Vice Dean for Academic Affairs, Research and Graduate Studies- College of Engineering and Petroleum- Kuwait University (October 2024 - Present).
- Acting Vice Dean for Planning, Consultation and Training- College of Engineering and Petroleum- Kuwait University (May 2023 – October 2024).
- Chairman – Petroleum Engineering Dep. – Kuwait University (March. 2016 – June 2020).
- Program Director – Master joint degree of Program of Petroleum & Geoscience – Kuwait University (Sep. 2012 – Aug. 2014).
- Associate Professor – Petroleum Eng. Dept. - Kuwait University (March 2010 – Present)
- Project Evaluator – H. H. Sheikh Sobah Al-Ahmed Innovation center, (Aug 2013- August 2014).
- Joint Researcher - Kuwait Oil Company, Heavy Oil Recovery, (2007 – 2008).
- Co-director, Core Flooding Laboratory, (2004 – Present).
- Co-Founder, Tertiary Recovery Laboratory, (2007 – Present).
- Founder and co-director of X-Ray CT imaging, (2009 – Present).
- Assistant Professor – Petroleum Engineering Dept. - Kuwait University, (Aug. 2003 – March 2010).
- Postgraduate Engineer- Kuwait University, (Dec. 1997 - Aug. 2003).
- Production Operation Engineer - Kuwait Oil Company, (Aug. 1995 – Dec. 1997).

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□ **PROFESSIONAL AFFILIATIONS**

- Society of Petroleum Engineers, Richardson, TX, USA.
- Society of Core analysts, California, USA.

□ **TEACHING COURSES**

Graduate Courses:

- (650-560) Thermal Recovery
- (650-507) Introduction to Enhanced Oil Recovery
- (2090-541) Core Analysis
- (2090-505) Introduction to Petroleum Engineering

Undergraduate Courses:

- (650-427) Secondary Recovery
- (650-324) Reservoir Engineering
- (650-221) Reservoir Rock Properties
- (650-475) Well Stimulation
- (650-496) Petroleum Engineering Design
- (650-150) Introduction to Petroleum Engineering
- (650-301) Fundamentals of Petroleum Engineering (for non-petroleum engineering students).

□ **RESEARCH ACTIVITIES**

(a) FUNDED PROJECTS BY KUWAIT UNIVERSITY

- Integration of Nanomaterials with Polymers and Surfactants for Enhanced Heavy Oil Recovery from Oil Fields. Project submitted to Kuwait University (Under Review).
- Graphene Nanocomposites with Embedded Quantum Dots for Enhanced Oil Recovery. Project # PN23-15EM-1847- KFAS - (Ongoing, Co-Investigator).
- Incorporating fluid flow through porous media to evaluate polymer retention: Experimental Approach. Project # RE02/21 – (Co - Investigator), On-going.
- Development of an Efficient Approach to predict oil recovery factor and CO₂ storability during CO₂-EOR projects. Project # RE04/19 – (Co - Investigator), Completed.
- The Effect of Preconditioning on Polymer Stability in Rocks. Project # EP02/10 – (Principal Investigator), Completed.
- Evaluation of miscible flood performance in Kuwait. Project # EP01/11 (XP01/09) – (Principal Investigator), Completed.
- Performance of Polymer Flood in Partially Fractured reservoirs. Project # EP01/08 – (Principal Investigator), Completed.
- Investigation of Polymer Flood Performance in High Salinity Oil Reservoirs. Project # EP02/07 – (Co - Investigator), Completed.
- Performance of the Thermal Recovery Processes in Middle Eastern Reservoirs. Project # EP01/06 – (Principal Investigator), Completed.
- Evaluation of Heavy Oil Recovery by Hot Water Injection in a Middle Eastern Reservoir. Project # EP03/05 – (Principal Investigator), Completed.

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- The Use of Integrated Simulation Approach to Optimize Oil Recovery from a Carbonate Reservoir. Project # EP01/04 – (Co-Investigator), Completed.
- Investigation of fluid residual gradient in dual porosity system. Project # ZE09/04 (Principal Investigator), Completed.

(b) SUPERVISED/CO-SUPERVISED GRADUATE STUDENTS (THESIS & PROJECTS)

- *(THE PH.D PROGRAM WILL START SEPTEMBER 2025.)*
- Applications of Aluminum and Copper Oxides Nanoparticles in enhanced oil recovery and its impacts on wettability alteration, interfacial tension and surfactant flooding, Ruqayya Alroshoud (On-going). Thesis co-supervisor.
- Investigation of the Effect of Chemical Gradient in Polymer Flooding, Rawan Alkandari (Completed - 2025). Thesis co-supervisor.
- Evaluation of Tracer Diffusion and Breakout Curve Development Using Potassium Iodide, Layla Abdullah (Completed - 2023). Thesis co-supervisor.
- Low Salinity Water Flood Evaluation in Kuwait Reservoirs, Rawan Alamer (2023 - Completed). Thesis supervisor.
- Numerical Evaluation of Steam Foam Applications in a Shaly-sand Heavy oil reservoir in Kuwait, Loloh AlAbbasi. (Completed - 2022). Thesis supervisor.
- Techno-Economic Evaluation of Polymer Flooding in Heavy Oil Reservoir Using Different Well Configurations, Narjas Ahmad Al-Mahmid. (Completed-2022). Thesis supervisor.
- Numerical Investigation of Wettability Effect in Fractured Reservoirs, Shahad Alajmi (Completed – 2021). Project supervisor.
- Assessment of Steam Injection in Heavy Oil fractured reservoirs, Heba AlAdwani (Completed – 2019). Thesis supervisor.
- Performance of Polymer Flooding in Linear Systems – Numerical Investigation. Saleh H. Alsayegh. M. Sc. Thesis (Completed – 2018). Thesis supervisor.
- Parametric Investigation of the Areal Displacement Efficiency of Polymer Flooding. Khadhr Ahmed Altarabulsi. M. Sc. Thesis (Completed – 2014). Thesis supervisor.
- The Performance of Gas Assisted Gravity Drainage Process (GAGD) - Parametric Investigation. Mariam Salloum. M. Sc. Thesis (Completed – 2013). Thesis co-supervisor.
- Parametric Analysis of Water Flood in Partially Fractured Reservoirs, Eman Alfadhli. M. Sc. Thesis (Completed – 2010). Project supervisor.

(c) SERVED AS A MEMBER/CONVENER IN THE THESIS EXAMINATION COMMITTEE

- Simulation and Analysis of Polymer Flooding in a Heavy Oil Sandstone Reservoir. Afrah Hameed Al-Abdullah. Member. March 2025.
- Effect of Low Salinity Water Displacement on the Wettability Alteration of Carbonate Rocks. Sarah Bader AlShuraiaan. Member. February 2025.
- Modeling the Poisson's Ratio of Carbonate Rocks Using Well Log Measurement: A Field Case Study from the Middle East. Aisha Mohammad AlDousari. December 2024.

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- An Experimental Study of Enhanced Oil Recovery in Wara Formation – Burgan Field. of Asmaa Al-Saeedi. Member. December 2024.
- Compositional Simulation Analysis of Miscible and Immiscible Gas Injection to Unlock the Potential of Tight Carbonate T-K Reservoir of North Kuwait, Reem Salah Al-Abbas. Member. October 2024.
- Effect of Gravity on the Relationship between Capillary Number and CDC Curve, Shouq H. Alabdulmuhsen. Convener. May 2023.
- Assessment of Displacing Front Arrival under Different In-situ Viscous Forces. Nourah Anwar Sultan. Convener. March 2023.
- Waterflood Optimization in A Complex Sandstone Reservoir Using Reservoir Simulation Modeling. Fahad Zaid Almutairi. Member. August 2022.
- A laboratory study of the CO₂ effect on the physical properties of Kuwaiti Crude oils. Duaa Tama Alrefaei. Convener. March 2022.
- Modeling the Flow Zone Indicator of Sandstone Rocks. Danah Waleed Eid. Convener. June 2021.

□ **PROFESSIONAL ACTIVITIES**

- Technical Committee member- The 38th International Symposium of the Society of Core Analysts, Hannover, Germany, August 25 to August 29, 2025.
- Speaker – Overview of Heavy Oil in the Gulf Countries; Past, Present and Future. SPE Unconventional Resources Symposium, Abu-Dhabi, UAE, January 23-24, 2024.
- Speaker – Applied Tracer Technology to Maximize Hydrocarbon Recovery. SPE Workshop. KOC February 16th, 2016.
- Session Chair - SPE International Heavy Oil Conference and Exhibition (HOCE), taking place 6-8 December 2016.
- Session Chair - Kuwait International Petroleum Conference and Exhibition (KIPCE) will be held 10-12 December 2012.
- Publisher and editor of the Petroleum Engineering Department Newsletters (2016-2020).
- Editor and reviewer for several petroleum engineering journals, (2003 – Present).
- Technical Committee member in several scientific events, (2005 – present).
- Reviewer to several per-reviewed scientific journals.
- Member of Master Degree Program for Petroleum Engineering Department (2015-2016).
- Member of the Scientific Committee for the Fourth Kuwait International Petroleum Conference & Exhibition (KIPCE 2012) held during 10-12 December 2012, Kuwait.
- Member of the Organizing Committee for the Third Kuwait International Petroleum Conference & Exhibition (KIPCE 2009) held during 14-16 December 2009, Kuwait.
- Coordinator and member of various committees in the Department of Petroleum Engineering and the college, Kuwait University.

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□ CONSULTATIONS

- Lab Evaluation of Polymer Flooding. Kuwait Oil Company. (Completed – Sept. 2024).
- Evaluation of Miscible Flood Performance in Kuwait. Kuwait Petroleum Company (KPC) (Completed - June 2013).
- Determination of Sand Settling Time for Lower Fars Formation. Kuwait Oil Company. (Completed - November 2010).
- Investigating the Performance of Horizontal Wells in the Marrat Reservoir – West Kuwait – a Numerical Study. Kuwait Oil Company. (Completed - June 2010).
- Reservoir Performance Evaluation by Miscible Flooding – Numerical Simulation Study. Kuwait Oil Company. (Completed - June 2009).
- Performance of Thermal Recovery Processes in Lower Fars Formation – Experimental and Numerical Evaluation. Kuwait Oil Company. (Completed - December 2008).

□ PUBLICATIONS

A- Journal Papers

1. **Abdullah Alajmi**, Meshal Algharaib and Mahmoud Ali; Experimental Study on the Injectivity, Adsorption, and In-Situ Rheology of HPAM Polymer in Intact and Fractured Sandstone. Journal of Petroleum Exploration and Production Technology, 2025, 15(58).
2. Meshal Algharaib and **Abdullah Alajmi**; The effect of slug arrangement on HPAM polymer injectivity and retention in sandstone. Journal of Porous Media, 2025, accepted.
3. Meshal Algharaib and **Abdullah Alajmi**; Estimating oil recovery factor and CO₂ storage capacity for CO₂-EOR projects using Non-Linear Regression Analysis. Journal of Engineering Research, 2024, article in press.
4. Osamah A Alomair and **Abdullah F Alajmi**; A novel experimental nanofluid-assisted steam flooding (NASF) approach for enhanced heavy oil recovery. Fuel, 2022, 313, Article number 122691.
5. **Alajmi, A.F.**; Heat loss effect on oil bank formation during steam flood. Journal Petroleum Science and Engineering, 2021, 199, 108262.
6. **Abdullah Alajmi** and Meshal Algharaib; Visualization and Analysis of Preflush Effect on Polymer Stability in Rocks Using X-Ray CT. Journal of Porous Media, 2021, 24(8), pp. 71–81.
7. Algharaib, M., **Alajmi, A.**, and Ertekin, T.; Investigation of heavy oil displacement by water injection. The Journal of Engineering Research, 2019, 7(3), pp. 304-319.
8. **Alajmi, A.**, Algharaib, M., and Al-Hamad, K.; Estimation of Sand Settling Time in Heavy Oil. Petroleum Science and Technology, 2015, 33, pp. 1418–1424.

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9. **Alajmi, A.**, Algharaib, M., Gharbi, R., Alenezi, H., AlMatar, B. and Al-Enezi, K.; Experimental Investigation of CO₂ Miscible Flood in West Kuwait. The Journal of Engineering Research, 2015, 3(3), pp. 124-140.
10. Meshal Algharaib, **Abdullah Alajmi**, and Ridha Gharbi.; Assessment of hot-water and steam floodings in Lower Fars reservoir. The Journal of Engineering Research, 2014, 2(1), pp. 183-200.
11. Meshal Algharaib, **Abdullah Alajmi**, and Ridha Gharbi.; Improving Polymer Flood Performance in High Salinity Reservoirs. Journal of Petroleum Science and Engineering, 2014, 115, pp. 17 - 23.
12. **Abdullah Alajmi**, Ridha Gharbi, and Meshal Algharaib.; The effect of heterogeneity and well configuration on the performance of hot water flood. Journal of Petroleum Science and Engineering, 2014, 122, pp. 524 -533.
13. Ridha Gharbi, **Abdullah Alajmi** and Meshal Algharaib; The Potential of a Surfactant/Polymer Flood in a Middle Eastern Reservoir. Energies, 2012, 5, pp. 58-70.
14. **Alajmi A.F**, Gharbi R and Chase R.; The Performance of Polymer Floods in Partially Fractured Reservoirs. Fractured Reservoirs, Journal of Porous Media, 2010, 13(11), pp. 961-971.
15. **Alajmi A.F** and Grader A.S.; Influence of Fracture Tip on Fluid Flow Displacement. Journal of Porous Media, 2009, 12(5), pp. 387-402.
16. Karpyn, Z., **Alajmi, A.**, Radaelli, F., Halleck, P., and Grader, A.; X-ray CT and hydraulic evidence for a relationship between fracture conductivity and adjacent matrix porosity. Engineering Geology, 2009, 103, pp. 139-145.
17. **Alajmi A.F**, Grader A.S and Alkafeef S; Evaluation of Tracer Diffusion in Layered System Using X-Ray CT. Journal of Petroleum Science and Technology. 2009, 27(11), pp. 1134-1150.
18. **Abdullah Alajmi**, Ridha Gharbi, and Meshal Algharaib; Investigating the Performance of Hot Water Injection in Geostatistically Generated Permeable Media. Journal of Petroleum Science and Engineering, 2009, 66, pp. 143 - 155.
19. Alkafeef S.F., and **Alajmi, A. F.**; Streaming potentials and conductivities of reservoir rock cores in aqueous and non-aqueous liquids. Journal of Colloids and Surfaces A, 2006, 289, pp. 141–148.
20. Saad F. Alkafeef, Meshal K. Algharaib, and **Abdullah F. Alajmi**; Hydrodynamic thickness of petroleum oil adsorbed layers in the pores of reservoir rocks. Journal of Colloid and Interface Science, 2006, 298, pp. 13-19.

B- Conference Papers

1. Rawan Al-Kandari, Mahmoud Ali, Meshal Algharaib and **Abdullah Alajmi**; Investigating the Effect of Chemical Gradient in Polymer Flooding. SCA – 1044. The

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- 37th International Symposium of the Society of Core Analysts, Fredericton, New Brunswick, Canada. – August 26-30, 2024.
2. **Abdullah Alajmi**; Overview of Heavy Oil in Gulf Countries; Past, Present and Future. Abstract presented in SPE Unconventional Resources Symposium, Abu Dhabi, UAE from 23-24 January 2024.
 3. Mariam Salloum, Meshal Algharaib and **Abdullah Alajmi**; The Performance of Gas Assisted Gravity Drainage Process - Parametric Investigation. This paper has been presented in the in the GCC 1st Engineering Symposium organized by Kuwait University, Kuwait, October 29-31, 2023.
 4. Rawan AlAmer, **Abdullah Alajmi**, Mesferah Al Qahtani and Ridh Gharbi; Investigation of Low Salinity EOR: Application for Kuwaiti Reservoir. SPE-198113. SPE Kuwait Oil & Gas Show and Conference, Mishref, Kuwait, October 2019.
 5. Osamah Alomair and **Abdullah Alajmi**; Experimental Study for Enhancing Heavy Oil Recovery by Nanofluid Followed by Steam Flooding NFSF. SPE-184117SPE, Heavy Oil Conference and Exhibition, Kuwait City, Kuwait. December 2016.
 6. **Abdullah F. Alajmi** and Meshal K. Algharaib; Fracture-Matrix Interaction during Polymer Flood. The International Symposium of the Society of Core Analysts, Colorado, USA, 21-26 August 2016.
 7. **Alajmi, A.**, Algharaib, M., Gharbi, R., Alenezi, H., AlMatar, B. and Al-Enezi, K.; Evaluation and Investigation of Miscible Flood in Kuwait - Case Study”. Paper SPE 173175 presented at the SPE Saudi Arabia Section Technical Symposium, AlKhobar, Saudi Arabia 21-24 April 2014.
 8. Algharaib, M. **Alajmi, A.**, and Gharbi, R.; Enhancing Recovery in High Salinity Oil Reservoirs through Optimized Polymer Flood. Paper IPTC 14685 presented at the International Petroleum Technology Conference, Bangkok, Thailand, 7-9 February 2012.
 9. **Alajmi, A. F.**; Modeling Oil Bank Formation During Steam Flood. SPE 142618, SPE Middle East Oil and Gas Show and Conference, 25-28 September 2011, Bahrain.
 10. Algharaib, M. **Alajmi, A.**, and Gharbi, R.; Investigation of Polymer Flood Performance in High Salinity Oil Reservoirs. Paper SPE 149133 presented at the SPE Saudi Arabia Section Technical Symposium, AL Khobar, Saudi Arabia, 15-18 May 2011.
 11. Algharaib, M. **Alajmi, A.**, and Gharbi, R.; Performance of Thermal Recovery Processes in a Middle Eastern Reservoir. Paper SPE 126081 presented at the SPE Saudi Arabia Section Technical Symposium, AL Khobar, Saudi Arabia, 9-11 May 2009.
 12. **Alajmi, A.**, Gharbi, R., and Algharaib, M.; Performance of Hot Water Injection in Heterogonous Reservoirs using Multilateral Wells. Paper SPE 126100 presented at the SPE Saudi Arabia Section Technical Symposium, AL Khobar, Saudi Arabia, 9-11 May 2009.

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13. Alkafeef, S., Zaid, A., and **Alajmi**, A. F.; On the Relationship Between Electrokinetics and Reservoir Rock Physical Properties. SPE 120032, SPE Middle East Oil and Gas Show and Conference, Bahrain, 15-18 March 2009.
14. **Alajmi**, A., Algharaib, M., and Gharbi, R.; Experimental Evaluation of Heavy Oil Recovery by Hot Water Injection in a Middle Eastern Reservoir. Paper SPE 120089 presented at the SPE Middle East Oil and Gas Show and Conference, Bahrain, 15-18 March 2009.
15. **Alajmi**, A and Gharbi, R.; Flow Characterization in Naturally Fractured Reservoirs. AGU Meeting ,H41A-0823 ,San Francisco, CA, USA ,15 - 19 December ,2008.
16. **Alajmi** A.F, Grader A and Halleck P.; Visualization of Steam Zone Advancement during Heavy Oil Recovery. SPE 120819, SPE Technical Symposium of Saudi Arabia Section, Dhahran, Saudi Arabia, 10-12 May ,2008.
17. Saad F. Alkafeef, Nab M. Al-Ajmi and **Abdullah F. Alajmi**; Applications of Streaming Potential Transient Tests to Electrokinetic Characterization of Oil Reservoirs. SPE-105372. SPE Middle East Oil and Gas Show and Conference, Manama, Bahrain, March 2007.
18. **Alajmi**, A, Algharaib, M, and Gharbi, R.; Heavy Oil Displacement by Thermal Recovery Using Different Horizontal/Vertical Wells configurations. paper SPE 106347 presented at the 2006 SPE Saudi Arabia Section Technical Symposium, Dhahran, Kingdom of Saudi Arabia, May 21-23, 2006.
19. Karpyn, Z., **Alajmi**, A. F., Francesco, R., Grader, A. S., and Halleck, P.; A Correlation between Fracture Apertures and Properties of the Surrounding Layered Sandstone Matrix. 32nd International Geological Congress, Florence, Italy, August 20-28, 2004.
20. Alkafeef, S.F., **Alajmi**, A.F., and Algharaib, M.; Hydrodynamic Thickness of Petroleum Oil Adsorbed Layers in Wide Pipes. Paper presented at the International Symposium of Electrokinetic Phenomena, Pittsburgh, PA, USA, 13-17 June 2004.
21. Karpyn, Z., **Alajmi**, A. F., Parada, C., Grader, A. S., Halleck, P., and Karacan, O.; Mapping Fracture Aperture Using Micro Computing Tomography. A24, Proceeding of the Society of Core Analysis International Conference, Pau, France, 21-24 September 2003.
22. **Alajmi**, A. F., and Grader, A. S.; Multi-Phase Flow in the Presence of a Fracture Tip: Experiments and Modeling. A91, Proceeding of the Society of Core Analysis International Conference, Pau, France, 21-24 September 2003.
23. **Alajmi**, A. F., and Grader, A. S.; The Impact of a single fracture on fluid flow displacement. KIPCE-A08, Proceedings of the Kuwait International Petroleum Conference and Exhibition on IOR management, Kuwait City, Kuwait, 14-16 December 2002.
24. **Alajmi**, A. F., and Grader, A. S., Analysis of Fracture-Matrix Fluid Flow Interaction Using X-Ray CT, SPE 65628 presented at 2000 SPE Eastern Regional meeting in Morgantown, West Virginia, 17-19 October 2000.