

Dr. Fahad B. Almudairis

Assistant Professor, Petroleum Engineering Department

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Research Interests:

Oil and Gas Production, Multiphase Flow, Flow Assurance, Artificial Lift, CFD Modeling, Production Surface Facilities, Rock Mechanics and Geomechanical Characterization.

Education

<i>Degree</i>	<i>Field</i>	<i>Institution</i>	<i>Year</i>
Ph.D.	Petroleum Engineering	The University of Tulsa, OK., USA	2018
M.Sc.	Petroleum Engineering	The University of Tulsa, OK., USA	2014
B.Sc.	Petroleum Engineering	Kuwait University	2008

Academic and Professional Experience

<i>Institution/Organization</i>	<i>Designation</i>	<i>Year / Period</i>
Kuwait University, College of Engineering and Petroleum	Assistant Professor	2019 - Present
The University of Tulsa, Petroleum Engineering, OK., USA	Research Assistant	2013 - 2018
Kuwait Oil Company	Unit Head / Drilling & Workover Engineer	2008 - 2012

Thesis/Project Supervision and Committee Member

<i>Title</i>	<i>Type</i>	<i>Program</i>	<i>Role</i>	<i>Year</i>
Design of a New Sucker Rod Pump System to Improve Production from Sandy Wells Using CFD Simulations	Thesis	Petroleum Engineering	Supervisor	2024 - Present
The Effect of Water Cycling and Temperature on the Brittleness of Shale Rock	Thesis	Petroleum Engineering and Geosciences	Co-Supervisor	2025 - Present
Optimization of a Three-phase Separator using Computational Fluid Dynamics	Thesis	Petroleum Engineering	Co-Supervisor	2023 - Present
Modeling the Liquid Rate for Wells Completed with an Electrical Submersible Pump Using Machine Learning Techniques	Thesis	Petroleum Engineering and Geosciences	Co-Supervisor	2021
Failure Study of Production Tubing due to Microbiological Influenced Corrosion	Project	Petroleum Engineering and Geosciences	Committee Member	2024
Experimental Investigation on the Effects of Temperature on the Permeability of Shale	Project	Petroleum Engineering and Geosciences	Committee Member	2022

Using Ceramic Membrane Filtration System to Enhance the Reinjecting Water Quality in Middle East Oil Fields	Project	Petroleum Engineering and Geosciences	Committee Member	2021
Well Monitoring and Intervention during Cyclic Steam Flooding in Lower Fars South Ratqa Heavy Oil Field	Project	Petroleum Engineering and Geosciences	Committee Member	2021

Professional Activities

<i>Designation</i>	<i>Details</i>	<i>Year / Period</i>
Reviewer	J. Petroleum Sci. & Eng.; J. Natural Gas Sci. & Eng.	2015 - Present
Member	Society of Petroleum Engineers (SPE)	2007 - Present

Honors and Awards

<i>Name</i>	<i>Details</i>	<i>Year</i>
Outstanding Engineer	Kuwait Oil Company	2011 & 2012
Record for Drilling the Longest Lateral Section in Kuwait History	Kuwait Oil Company and Schlumberger	2012
Award of Excellence in Teaching	Kuwait University	2023 - 2024

Courses

<i>Institution</i>	<i>Course No.</i>	<i>Course Name</i>	<i>Type</i>	<i>Level</i>
College of Engineering and Petroleum, Kuwait University	PE101	Petroleum Basics for Non-Petroleum	Academic	Undergraduate
College of Engineering and Petroleum, Kuwait University	PE251	Introduction to Petroleum Engineering Design	Academic	Undergraduate
College of Engineering and Petroleum, Kuwait University	PE301	Fundamentals of Petroleum Engineering for Non-Petroleum	Academic	Undergraduate
College of Engineering and Petroleum, Kuwait University	PE411	Petroleum Production Engineering	Academic	Undergraduate
College of Engineering and Petroleum, Kuwait University	PE435	Artificial Lift & Production Equipment Design	Academic	Undergraduate
College of Engineering and Petroleum, Kuwait University	PE471	Natural Gas Sweetening & Dehydration	Academic	Undergraduate
College of Engineering and Petroleum, Kuwait University	PE496	Petroleum Engineering Design	Academic	Undergraduate
College of Engineering and Petroleum, Kuwait University	PE555	Two-Phase Flow Modeling in Pipes	Academic	Graduate
College of Engineering and Petroleum, Kuwait University	PE556	Advanced Production Engineering	Academic	Graduate

KOC, KPC, KIPIC, KNPC, KGOC	-	Natural Gas Processing Engineering Integrated Training Program	Short Course	Other
Kuwait Oil Company	-	Introduction to Drilling Engineering	Short Course	Other

Publications

No.	Information
1	Almudairis, F. and Al-Bazali, T., 2025, "On Shale's Compressive Strength: effects of dehydration and ionic strength," <i>Petroleum Science and Technology</i> .
2	Almudairis, F., Almaqseed, N., and Fendorf, S., 2025, "Development of an Advanced Mechanistic Heat Transfer Model to Predict Motor Skin Temperatures in Scale-Prone Electrical Submersible Pump Applications," <i>SPE J.</i> 30 (09): 5645-5667
3	Al-Qasim, A., Almudairis, F., and Alsubhi, M., 2020, "Heavy Organic Deposit Comprehensive Analysis and Testing Techniques," <i>Upstream Oil and Gas Technology</i> 5
4	Al-Qasim, A., Almudairis, F., El Sheshtawy, M. et al. 2020, "Monitoring and Surveillance of Subsurface Multiphase Flow and Well Integrity," <i>Upstream Oil and Gas Technology</i> 5
5	Al-Qasim, A., Almudairis, F., 2020, "Formation Damage Control, Modeling, Analysis and Remediation Techniques," 2020, SPE 199302, Presented at the SPE International Symposium on Formation Damage Control, Lafayette, Louisiana, 23-24 February
6	Al-Qasim, A., Almudairis, F., Bin Omar, A., Omair, A., 2019, "Optimizing Production Facilities Using a Transient Multiphase Flow Simulator," OMAE 95002, Presented at the 38 th International Conference on Ocean, Offshore, and Arctic Engineering, Glasgow, Scotland, June 9-14.
7	Al-Qasim, A., Almudairis, F., AlAbdulatif, Z., Alsubhi, M., 2019, "Optimizing Production Using Nodal Analysis Applications," SPE 198136, Presented at the SPE Kuwait Oil & Gas Show and Conference, Mishref, Kuwait, October 13-16
8	Almudairis, F., Zhang, H.-Q., 2017, "Transient Operations and Instabilities in Different Production Scenarios: Modeling and Validation," SPE 187393, Presented at the SPE ATCE, San Antonio, Texas, October 9-11
9	Li, J., Almudairis, F., Zhang, H.-Q., 2014, "Predicting of Critical Gas Velocity of Liquid of Liquid Unloading for Entire Well Deviation," IPTC 17846, Presented at the International Petroleum Technology Conference, Kuala Lumpur, Malaysia, December 10-12
10	Jumah, S., Saleh, K., Al-Mayyan, H., Almudairis, F., Hawkins, D., Al-Abri, H., Martinez, P., 2010, "Overcoming Uncertainties through Advanced Real-Time Wellbore Positioning in Kuwait: A Success Story," SPE 128522, Presented at the North Africa Technical Conference and Exhibition, Cairo, Egypt, February 14-17

Scholarships

Institution	Name	Location	Year
Kuwait University	Scholarship for Higher Studies (M.Sc. and Ph.D.)	USA	2013 - 2018
Kuwait Oil Company	Schlumberger Drilling Fluids School	Dubai, UAE	2012
Kuwait Oil Company	Advanced Drilling Engineering	Aberdeen, Scotland	2009
Kuwait University and Arabian Oil Company	Reservoir Evaluation and Simulation	Tokyo, Japan	2007

Committees & Leadership Roles

<i>Committee Name</i>	<i>Organization</i>	<i>Designation</i>	<i>Year</i>
Pet. Eng. Department Equipment, Budget, and Laboratories Committee	Kuwait University	Chairman	2021 - present
Pet. Eng. Department Excellence in Teaching Committee	Kuwait University	Chairman	2024 - 2025
Pet. Eng. Department Student Affairs and Counseling	Kuwait University	Coordinator	2020 - 2022
Pet. Eng. Department Library Committee	Kuwait University	Coordinator	2019 - 2021
Pet. Eng. Department Appointment and Contract Renewal Committee	Kuwait University	Member	2024 - present
Master of Science in Petroleum Engineering Program Committee	Kuwait University	Member	2023 - present
Doctor of Science in Petroleum Engineering Program Committee	Kuwait University	Member	2024 - present
Pet. Eng. Department Scholarship Committee	Kuwait University	Member	2021 - 2023
Committee for Evaluating Petroleum Engineering PhD Program (Proposal)	Kuwait University	Member	2021
Pet. Eng. Department Research Committee	Kuwait University	Member	2020 - 2021
Special Task Force for Reviving the Abandonment Wells in Burgan Field	Kuwait Oil Company	Facilitator	2012
KOC Integrity Management Implementation	Kuwait Oil Company	Member	2011
Kuwait Water Wells Optimization	Kuwait Oil Company	Member	2010