

Curriculum Vitae

Personal Details and Contacts:

Name: Walid Mohamed Mahmud

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Education:

	Completed
1. Doctor of Philosophy (Petroleum Eng.) The University of New South Wales, Sydney, Australia	2004
2. Master of Engineering (Petroleum Eng.) The University of New South Wales, Sydney, Australia	1998
3. Bachelor of Engineering Science (Petroleum. Eng.) University of Tripoli, Tripoli, Libya	1994
4. Master of Business Administration The University of Southern Queensland, Toowoomba, Australia	2007

Experience:

Lecturer, Assistant Professor then Associate Professor Since February 2011

The University of Tripoli, Petroleum Engineering Department, Tripoli, Libya
Teaching several petroleum engineering courses including Fluid Flow in Porous Media, Introduction to Petroleum Engineering, Oil Field Equipment, Well Completion, Oil Field Water Management and Engineering Economy.
Supervising graduation projects.

Memberships and Affiliations:

- SPE (Society of Petroleum Engineers) Since 1997.

Publications:

1. Walid Mohamed Mahmud and Viet Hoai Nguyen: “*Effects of Snap-Off in Imbibition in Porous Media with Different Spatial Correlations,*” *Transport in Porous Media*, Volume 64, Number 3, September 2006, 279-300.

2. Walid Mohamed Mahmud, Ji Youn Arns, Adrian Sheppard, Mark A. Knackstedt and W. Val Pinczewski: “*Effect of Network Topology on Two-Phase Imbibition Relative Permeability*”, *Transport in Porous Media*, Volume 66, Number 3, February 2007, 481-493.

3. Walid Mohamed Mahmud: “*The Effect of Fluid Saturation Profiles on Three-Phase Oil Relative Permeabilities and Oil Recovery,*” paper SPE 108328 presented at the 2007 SPE Annual Technical Conference and Exhibition, Anaheim, California, U.S.A., 11–14 November.

4. Khulud Rahuma and Walid Mahmud: “*Computing of Petrophysical Properties for Dolomite and Quartzite Reservoir Formations*” *Electronic scientific journal “Oil and Gas Business”*, 2013, No 1, <http://www.ogbus.ru>

5. Saleh Arwini and Waild Mahmud: “*Study of Multiphase Flow in Inclined Wells - Field Case Study*” paper MPC-14-23 presented at The Thirteenth Mediterranean Petroleum Conference and Exhibition (MPC2014) held in Istanbul, Turkey 14-16 October 2014.

6. Walid Mohamed Mahmud, Saleh Arwini and Mohamed Lalah: “*Experimental and Network Model Study on the effect of Network Topology on Two-Phase Imbibition Relative Permeability*” paper MPC-14-22 presented at The Thirteenth Mediterranean Petroleum Conference and Exhibition (MPC2014) held in Istanbul, Turkey 14-16 October 2014.

7. M. KH Khalifa, W. M. Mahmud, A. F. Alta’ee and K. J. Mills: “*Sequence stratigraphic analysis of fluvial deposits using facies characterization and wireline log correlation: case of the late Early-early Middle Devonian Snake Cave Interval, Darling Basin, Australia*”, Arabian Journal of Geosciences: November 2015, Volume 8, Issue 11, pp 9733-9752

8. M. KH. Khalifa , B. G. Jones, W. M. Mahmud: “*Lithostratigraphic and sequence stratigraphic architecture of the Winduck Interval, central Darling Basin, Australia, based on integration of wireline logs, cores and cuttings data*”, International Journal of Earth Sciences: September 2015, 1-18.

9. Walid Mohamed Mahmud “*Experimental Validation of Two-Phase Imbibition Relative Permeability with a Stochastic Model Taking into Account the Effects of Correlations*”, MOC - 8th Mediterranean Offshore Conference and Exhibition, Alexandria, Egypt, 19-21 April 2016.

10. Walid Mohamed Mahmud and Saber Elmabrouk “*Drilling Rig Selection and Cost Analysis: a Comparison of Top Drive and Rotary Table Drilling Systems*”, paper presented at the International Conference on Industrial Engineering and Operations Management, Detroit, September 23-25, 2016.

11. Saber Elmabrouk and Walid Mohamed Mahmud “*Reservoir Management Strategies for Development of Water Injection Planning Project*”, paper presented at the International Conference on Industrial Engineering and Operations Management, Detroit, September 23-25, 2016.

12. Walid Mohamed Mahmud and Saber Kh. Elmabrouk “*Prediction of Trip, Connection and Total Times for Top Drive and Kelly Drilling Rig Systems*”, paper presented at The 1st International Conference on Chemical, Petroleum, and Gas Engineering (ICCPGE 2016) 20th – 22th December 2016, Alkhoms-Libya

13. Walid Mohamed Mahmud “*Effect of Network Topology on Relative Permeability; Network Model and Experimental Approaches*”, International Journal of Oil, Gas and Coal Engineering, Volume 5, Issue 5, September 2017, Pages: 90-96

14. Saber Kh. Elmabrouk, Husen E. Bader and Walid Mohamed Mahmud “*An Overview of Power Plant CCS and CO2-EOR Projects*” paper presented at the International Conference on Industrial Engineering and Operations Management, Rabat, Morocco, April 11-13, 2017.

15. Hassan M. Sbiga, Saber Elmabrouk and Walid Mohamed Mahmud “*Factors Affecting Special Core Analysis Resistivity Parameters*” paper presented at the International Conference on Industrial Engineering and Operations Management, Rabat, Morocco, April 11-13, 2017.

16. Walid Mohamed Mahmud, Saber Kh. Elmabrouk and Hussam Ed. M. Abdul Jaliel “*Assessment of Scale Removal by Chemical and Underbalance Mechanical Treatments*” paper presented at the International Conference on Industrial Engineering and Operations Management, Rabat, Morocco, April 11-13, 2017.

17. Walid Mohamed Mahmud, Saber Elmabrouk and Hisham Khaled Ben Mahmud “*Investigating Relative Permeability Measurements using Unsteady-State Core Flooding Method*”, International Journal of Petroleum and Petrochemical Engineering (IJPPE), Volume 3, Issue 4, 2017, PP 54-64.

18. Walid Mohamed Mahmud, Saber Kh. Elmabrouk and Hassan M. Sbiga “*Sensitivity Analysis of the Gas Compressibility Factor*” Paper presented at the 8th International Conference in Industrial Engineering and Operations Management, Bandung, Indonesia, March 6-8, 2018.

19. Hassan M. Sbiga, Saber Kh. Elmabrouk and Walid Mohamed Mahmud “*Prediction of Relative Permeability From Experimental Resistivity Index and Capillary Pressure Data*”, Paper presented at the 8th International Conference in Industrial Engineering and Operations Management, Bandung, Indonesia, March 6-8, 2018.

20. Saber Kh. Elmabrouk, Walid Mohamed Mahmud and Hassan M. Sbiga “*Calculation of EUR from Oil and Water Production Data*”, Paper presented at the 8th International Conference in Industrial Engineering and Operations Management, Bandung, Indonesia, March 6-8, 2018.

21. T. Sabila, H.K. Ben Mahmud, W.M. Mahmud and M.I.J. Van Dijke “*Two-Phase Oil-Water Empirical Correlation Models for SCAL and Petrophysical Properties in Intermediate Wet Sandstone Reservoirs*”, Paper presented at the 11th Curtin University Technology, Science and Engineering (CUTSE) International Conference at Curtin University Malaysia, Miri, Sarawak, Malaysia, November 26-28, 2018.

22. Walid Mohamed Mahmud, Mansur Ermila and Hisham Khaled Ben Mahmud “*Utilizing Well Logs and Experimental Core Data to Assess Hydrocarbon Potential of a Mature Oilfield*”, Paper to be presented at the 2nd International Conference And Expo on Oil & Gas Dubai, UAE, December 2-3, 2019.

23. Potential of Low-Salinity Waterflooding Technology to Improve Oil Recovery
By Hisham Ben Mahmud, Shattia Arumugam and Walid Mahmud
September 12th 2019. DOI: 10.5772/intechopen.88082
<https://www.intechopen.com/online-first/potential-of-low-salinity-waterflooding-technology-to-improve-oil-recovery>

24. Walid Mohamed Mahmud, Mansur Ermila, R.S. Aljahmi and N. Esseid “*Comparison between SCAL measurements and Pore-Scale Network Models for neutrally wet sandstone on Two-Phase Oil-Water Empirical Correlations and Petrophysical Properties*”, Paper SPE 19979 presented at the 12th edition of the International Petroleum Technology Conference (IPTC), Dhahran, Kingdom of Saudi Arabia, 13–15 January 2020.

25. Walid Mohamed Mahmud and Mansur Ermila, “*Case Study of Successful Removal of Barium Sulfate Scale by Dynamic Underbalance*”, Paper presented at the SPE International Conference and Exhibition on Formation Damage Control, Lafayette, Louisiana, USA, February 2020.

- 27.** Hisham Ben Mahmud, Mansur Ermila, Ziad Bennour and Walid Mohamed Mahmud
A Review of Fracturing Technologies Utilized in Shale Gas Resources, May 11th 2020
DOI: 10.5772/intechopen.92366
IntechOpen
- 28.** Hisham Ben Mahmud, Walid Mohamed Mahmud and Shattia Arumugam,
“Numerical investigation of optimum ions concentration in low salinity waterflooding”,
Advances in Geo-Energy Research, Vol. 4, No. 3, p. 271-285, 2020
- 29.** Hisham Ben Mahmud, Walid Mohamed Mahmud, Rugen Ayanarappan, and Saber Elmabrouk, “Effect of Sodium Carbonate and Bicarbonate Contamination on the Rheological Properties of Water Based Mud”, International Journal of Engineering Research and Technology. ISSN 0974-3154, Volume 13, Number 5 (2020), pp. 1019-1029
- 30.** W. M. Mahmud, O. E. Abdussalam, Ziad Bennour and M. Ermila, “Relative permeability of heterogeneous mixed-wet porous media as determined by pore-scale JBN based model”,
Paper 30201-MS OTC presented at the Offshore Technology Conference Asia, Kuala Lumpur, Malaysia, 2-6 November 2020.
- 31.** Ziad Bennour, Walid Mohamed Mahmud, Mansur Ermila, “Effect of Multiple Fracture Initiation on the Accuracy of Hydraulic Fracturing Simulation”, Paper presented at the ASME 2020 39th International Conference on Ocean, Offshore and Arctic Engineering OMAE2020 June 28th -July 3rd, 2020. Fort Lauderdale, FL, USA.
- 32.** Walid Mohamed Mahmud, Xiaolong Yin and Mansur Ermila, “Evaluation of a Non-Interactive Bundle-of-Tubes Model for Calculation of Unsteady-State Relative Permeabilities with Laboratory Measurements”, Journal of Porous Media, Volume 23, 2020 Issue 12.
- 33.** Walid Mohamed Mahmud and Ziad Bennour, “Case Study of Petrophysical Evaluation Utilizing Well Logs Data with Optimization of Reservoir Cut-off Parameters”, International Journal of Petroleum Technology, 2020, 7, 45-59.
- 33.** Hisham Ben Mahmud, Walid Mohamed Mahmud, Ali Al-Rubaie, “Modeling Interaction Between CO₂, Brine and Chalk Reservoir Rock Including Temperature Effect on Petrophysical Properties”, Energy Geoscience, 2021.
- 34.** Walid Mohamed Mahmud, “Rate-Controlled Mercury Injection Experiments to Characterize Pore Space Geometry of Berea Sandstone” Presented at the 34th International Symposium of the Society of Core Analysts, Austin, Texas, USA, 13-16 September 2021.
- 35.** Walid Mohamed Mahmud, Omran Elhamali Abdussalam, Yousef Swissi, Saber Kh. Elmabrouk, “Case Study Of Gravity And Power Assisted Dump Floods Implemented In A Mature Oil Field” Paper SPE 22419 presented at the International Petroleum Technology Conference (IPTC), Riyadh, Kingdom of Saudi Arabia, 21–23 February 2022.
- 36.** Hisham Khaled Ben Mahmud, Walid Mohamed Mahmud, Mian Umer Shafiq et al.
“Application of Nanotechnology in EOR” In book: Application of Nanotechnology in Enhanced Oil Recovery, Publisher: Springer. DOI: 10.1007/978-981-16-6022-1

37. Saber Kh. Elmabrouk and Walid Mohamed Mahmud “Production Data Analysis Techniques for the Evaluation of the Estimated Ultimate Recovery (EUR) in Oil and Gas Reservoirs” HighTech And Innovation Journal, Vol 3, No 1 (2022).

DOI: 10.28991/HIJ-2022-03-01-09

38. W.M. Mahmud, S. Elmabrouk and O. Abdussalam “Produced Water Management; Case Study” Paper SPE 32070 presented at the Offshore Technology Conference (OTC), Houston, Texas, 2–5 May 2022.

39. Walid Mohamed Mahmud “Impact of salinity and temperature variations on relative permeability and residual oil saturation in neutral wet sandstone” Capillarity, Vol 5, No 2 (2022)