

ALI AMEUR GARROUCH

PETROLEUM ENGINEERING DEPARTMENT
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PERSONAL PROFILE

Industrious, motivated professional with expertise in the area of Petrophysics. Proficient in the interpretation of open-hole well logs, cased-hole well logs, and NMR logs. Possesses strong communication, management, and leadership skills. Have a passion for delivering service quality at the highest standards. My commitment to excellence is at the core of everything I do.

EDUCATION

Ph.D. in Petroleum Engineering	University of Texas, Austin, USA 1992
M.S. in Petroleum Engineering	University of Texas, Austin, USA 1987
B.S. in Petroleum Engineering	Louisiana State University, USA 1985

CORE COMPETENCIES

- Open-Hole Well Log Interpretation
- NMR Log Interpretation
- Production Log Interpretation
- Special Core Analysis
- Acidizing Design of Sandstones
- Acidizing Design of Carbonates
- Acid Fracturing Design
- Hydraulic Fracturing Design
- Formation Damage Diagnosis
- Transport Phenomena in Porous Media
- Data Mining

INDUSTRIAL EXPERIENCE

KUWAIT OIL COMPANY/Research and Technology Department *Technical Leading Consultant*

2023-2024: Reservoir Characterization of Makhul reservoir in the Minagish Oil field. The work included building a static model used to study production sustainability after hydraulic fracturing.

2013-2014: Diagnosing particle and organic damage in sandstone formations in Kuwait Oil fields.

2011: Building an expert system for diagnosing formation damage in sandstone formations of Rawdhatain Oil field.

2010: Designing acidizing job for sandstone formations in Rawdhatain Oil field.

2008-2009: Feasibility study for multilateral well drilling in Rawdhatain Oil field.

KUWAIT PETROLEUM COMPANY *Technical Leading Consultant*

2005: Assessing KPC training program and identifying key interventions that can boost employee's performance, motivation, competence, and eventually can have clear tangible benefits to the oil sector in Kuwait.

LEADERSHIP & ADMINISTRATION POSITIONS

- Director of the Petroleum Engineering & Geology M.S. program (September 2017-Present)
- Chairman, Petroleum Engineering Department (September 2013 – August 2015)
- Chair, Promotion Committee in the Petroleum Engineering Dept. (2013-2016)
- Chair, Recruitment Committee in the Petroleum Engineering Dept. (2013-2015)
- Chair, Scholarship Committee in the Petroleum Engineering Dept. (2013-2015)
- Director of the Graduate School Program at the Petroleum Engineering department (2006-2007)
- Director of the Graduate School Program at the Petroleum Engineering department (2001-2003)
- Chair of the ABET Accreditation Committee in the PE department (1993-2007 & 2010-2011)
- Chair of Undergraduate Program Committee in the PE department (1993-2011)
- Member of the College Promotion & Hiring Committee (2012-2013)

ACADEMIC PROFESSIONAL HISTORY

KUWAIT UNIVERSITY, *Kuwait City*

Department Chairman

September 2013- August 2015

Professor

2005-present

Associate Professor

1998-2004

Assistant Professor

1993-1997

UNIVERSITY OF TEXAS AT AUSTIN, *Austin, Texas, USA*

Postdoctoral Fellow

1992

FUNDED RESEARCH PROJECTS

<u>Project #</u>	<u>Source/Year</u>	<u>Title</u>
EP 001	KU/94	Modeling dielectric dispersion in sands
EP 002	KU/95	Immiscible displacement in horizontal wells
EP 007	KU/96	Integrating ANN and Karhunen- Loeve decomposition for estimating permeability
KFAS9482	KFAS/97	Modeling polymer flow in porous media
EP 015	KU/98	Developing a modified Leverett J-function
EP 02/99	KU/99	An expert system for predicting organic scale deposition and assessing formation damage
EP 03/00	KU/00	A drilling advisor system
EP 05/01	KU/01	Development of a rule based system for multilateral wells
EP 02/03	KU03	A comprehensive expert system to diagnose and recommend treatment for formation damage
EP 01/05	KU05	Modeling radial dispersion in porous media
EP 02/06	KU/07	Estimating rock petrographic properties from non-destructive dielectric permittivity measurements

EDITORIAL AND REFEREE TASKS & SPECIAL DUTIES

- Chair, Chemical Engineering Department Head Search Committee (September-October, 2017)
- Professor Representative in the Engineering College Council (Academic year: 2017-2018)
- Professor Representative in the Engineering College Council (Academic year: 2016-2017)
- Chair, Civil Engineering Department Head Search Committee (April, 2016)
- Member, Electrical Engineering Department Head Search Committee (March, 2016)
- Member, Civil Engineering Department Head Search Committee (January, 2012)
- Member of the Engineering College Committee for promotion and contract renewal, 2012/2013.
- Chair of the Referee Committee for the Teaching Award Prize for the College of Engineering, 2011/2012.

- Member of the Selection Committee for the Civil Engineering Department Department Head, 2011/2012.
- Member of the Referee Committee for the Teaching Award Prize for the College of Engineering, 2007.
- Member of the Referee Committee for the LABEX Award Prize for the College of Engineering, 2007.
- Technical Editor on the Review Committee for the SPE Production & Operation Journal, 2006.
- Editorial Board Member of the International Journal of Petroleum Science & Technology (IJPST), 2006-present.
- Member of Referee Committee for “Faiza Al-Khurafi” Prize, Kuwait University, 2006.
- Member of Referee Committee for Mohammed Ahmed Al-Ajeel M.S. Thesis: Tunisian Sid El Kilani Oil Field Modeling, Geology Department, Kuwait University, 2006.
- Member of Referee Committee for Souad Al-Anzi M.S. Thesis: Modeling the dynamics of non-linear PDE using neural networks, Math Department, Kuwait University, 2003.
- Technical-Paper Reviewer for Petroleum Science & Engineering Journal, Kuwait Journal of Science & Engineering, Journal of Porous Media, SPE Production, and Petrophysics Journal.

TRAINING WORKSHOPS ATTENDED

- Applied Rock Mechanics, Petroskills, November 18-20, 2019, Houston, Texas.
- Nuclear Magnetic Resonance (NMR) Petrophysics, Petroskills, August 20-23, 2018, Houston, Texas.
- Integrated Reservoir Modeling, Petroskills, December 10-15, 2017, Houston, Texas.
- StimPlan Hydraulic Fracturing Software Training, NSI Technologies, Houston, Tx, May 9-10, 2017.
- Shaly Sand Petrophysics, Petroskills, May, 2016, Denver, Colorado.
- Acidizing Applications in Sandstones & Carbonates, Petroskills, May, 2015, Houston, Texas.
- Principals of Hydraulic Fracturing/GOHFER Training, Barree & Associates, December, 2014, Denver, Colorado.
- Introduction to Underbalanced Drilling, SPE, ATCE 2008, Denver, Colorado.
- Horizontal Well Completions, SPE, ATCE 2008, Denver, Colorado.
- Hydraulic Fracturing/ Pressure Analysis, SPE, ATCE 2006, San Antonio, Texas.
- Reservoir Aspects of Horizontal and Multilateral Wells, SPE, ATCE 2005, Dallas, Texas.
- Rock Mechanics Aspects of Sand Control Methods, SPE, ATCE 2005, Dallas, Texas.
- PVT Simulation, Calsep, 1998, Copenhagen, Denmark.
- Formation Damage, SPE, ATCE 1995, Dallas, Texas.

SOFTWARE PROFICIENCY

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|----------------------|---|
| • PVTsim: | Simulator for Modeling Organic and Inorganic Scale Deposition |
| • Digitran ADS 9800: | Advanced Drilling Simulator System |
| • NeuroShell: | Artificial Intelligence Software |
| • GOHFER: | Hydraulic Fracturing Simulator |
| • SPSS: | Statistical Analysis Software |

SHORT COURSES TAUGHT FOR KUWAIT OIL COMPANY

- Application of expert Systems for Sandstone Acidizing, and Formation Damage Diagnosis.
- Causes, Diagnosis and Remedies of Formation Damage.
- Open-Hole Well Log Interpretation.
- Production Log Interpretation.
- Acidizing Sandstone Formations.
- Hydraulic Fracturing.

TEACHING EXPERIENCE

The University of Texas at Austin

- *Transport Phenomena (CHE 453)*, Department of Chemical Engineering, (1990-1992).
- *Petrophysics Laboratory (PE 424)*, Department of Petroleum Engineering, (1990-1992).

Kuwait University

- Mathematical Methods in Petroleum Engineering (PE 506), (Spring 20, Spring 22, Spring 24)
- Formation Evaluation (PEG 512), (Fall 2010, Spring 2013, Spring 2015, Spring 2020, Fall 2021)
- Advanced Well Log Interpretation (PE 562), (Fall 2018)
- *Advanced Well Stimulation (PE 550/2090-550)*, (Spring 17, Fall 20, Spring 21, Spring 24)
- *Geostatistics (2090-511)*, (Fall 2017, Spring 2019, Spring 2021, Fall 2021, Spring 2025)
- *Introduction to Geostatistics (PE 485)*, (Fall 2016, Fall 2017, Spring 2019)
- Engineering Analysis I (Engineering 501), (2011-2012)
- *Transport Phenomena in Geosystems (PE 505)*, (2001-2012, Spring 2023)
- *Fluid Mechanics for Petroleum Engineers (PE 241)*, (2012-2016, Spring 2021)
- *Production Logging (PE 2090-512)*, Spring 13, Spring 2015, Spring 2017, Spring 2017)
- *Formation Evaluation (PE 431)*, (1993-1994, 1998 & Fall 10)
- *Advanced Petrophysics (PE 501)*, (Fall 01, Spring 04, Spring 2006, Spring 08)
- *Core Analysis (2090- 541)*, (Spring 2022)
- *Petrophysics Laboratory (PE 322)*, (1994-2003)
- *Formation Damage and Well Stimulation (PE 511)*, (Spring 02, Fall 03, Spring 05, Fall 06)
- *Well Logging (PE 354)*, (2000-2025)
- *Well Logging Laboratory (PE 355)*, (2000-2025)
- *Reservoir Rock Properties (PE 221)*, (1994 – 2000, Summer 2014)
- *Reservoir Engineering (PE 324)*, (1995, 1998, 2001-2003)
- *Engineering Analysis (600-501)*, (2011-2013)
- *Probability and Statistics for Engineers (600-304)*, (2001-2012, 2017-2018, 2018-2020)
- *Advanced Well Control Operations (PE 467)*, (1996-1997)
- *Drilling in Abnormal Pressure Zones (PE 537)*, (Fall 02)
- *Oil Well Drilling and Completion (PE 341)*, (1993- 2000, 2004, Spring 2005)
- *Mud and Cement Laboratory (PE 342)*, (1993-01, 04)
- *Industrial Training (PE 395)*, (Summer 1993 and 1994)
- *Secondary Recovery (PE 427)*, (2001-2003, Spring 07)
- *Advanced Methods in Applied Mathematics (MATH 454)*, (1995,1998)
- *Introduction to Petroleum Engineering Design (PE 251)*, (Fall 09, Spring 10)
- *Well Design (PE 496)*, (2000-2002)

INVITED AS A GUEST SPEAKER

- Petroleum Institute, Development of a rule based system for sandstone acidizing, Abu Dhabi, UAE, March 13, 2016.
- Petroleum Institute, Analytic solutions to fluid flow problems in simple and complex geometries for laminar and turbulent regimes, Abu Dhabi, UAE, March 13, 2016.
- Kuwait Oil Company, Research and Technology Department, Causes of organic and inorganic deposition in reservoir rocks, Ahmadi, Kuwait, December 5, 2014.
- World Congress on Petrochemistry and Chemical Engineering, Predicting the recovery performance of surfactant polymer floods, San Antonio, Texas, November 18-20, 2013.
- SPE Production Optimization Workshop, Challenges of sandstone acidizing, Manghaf, Kuwait, February 20, 2013.
- Kuwait Oil Company, Research and Technology Department, Screening analysis of multilateral wells in the Zubair formation, Ahmadi, Kuwait, December 13, 2010.
- Kuwait Oil Company, Research and Technology Department, A systematic approach for diagnosing various formation damage types, Ahmadi, Kuwait, November 24, 2010.
- Kuwait Oil Company, Research and Technology Department, Formation Damage Diagnosis, and Quantification Tools, Ahmadi, Kuwait, June 3, 2010.
- Kuwait Oil Company, Research and Technology Department, Acidizing Sandstone Formations: Causes of Failure, Ahmadi, Kuwait, March 17, 2010.

- PetroTel Oil Company, Formation Damage Diagnostic Tools, Plano, Dallas, May 8, 2006.
- International Quality and Productivity Centre Conference on Multilateral Wells, Multilateral Well Screening Criteria, Dusit Hotel, Dubai, March 19-21, 2006.
- SPE Middle East Colloquium on Petroleum Engineering Education, Petroleum Engineering Curriculum at Kuwait University, Grosvenor House Hotel, Dubai, February 12-15, 2006.
- Society of Core Analyst Forum, SCAL for Optimum Reservoir Development, Abu Dhabi, October 14-15, 1998.
- GRI/SPWLA International Forum on Permeability Well Logging, Use of pattern recognition tools for estimating hydrocarbon rock permeability from geochemical well logs, Houston, Texas, February 25-26, 1997.
- SPE Applied Technology Workshop, Carbonate Reservoir Stimulation, SAS Hotel, Kuwait, November 16-18, 1997.

TECHNICAL MANUSCRIPTS

PUBLISHED IN REFEREED JOURNALS

1. **Garrouch, A.A.**, Al-Dousari, M., Azubuike, N., and Al-Omair, O., 2025. Development of a macroscopically coherent capillary number that accounts for the full saturation history of immiscible displacements. *Journal of Porous Media*, v. 28, no. 11, 41-61.
2. Al-Mutairi, D., Al-Bazali, T., and **Garrouch, A.**, 2025. Parametric analysis of the performance of horizontal and vertical wells: economic and technical perspectives. *Geosystem Engineering*, October issue, 1-17, doi:10.1080/12269328.2025.2578607.
3. Almudhhi, S., Haitham M. S. Lababidi, and **Garrouch, A.A.**, 2025, Application of machine learning for modeling heavy oil viscosity, *Journal of Engineering Research*, Manuscript JER-D-25-00349, Article in press, Available online: doi.org/10.1016/j.jer.2025.05.009.
4. Al-Dousari, M.M., Al-Enezi, Y., and **Garrouch, A.A.**, 2025, An efficient approach for predicting Young's modulus of sandstones using well logs without shear-wave travel time, *Petrophysics*, v. 66, no. 5, 741-762.
5. Qasem, F., Baqer, H., and Garrouch, A.A., 2025. Insights into the breakthrough time of water coning phenomenon in partially naturally fractured reservoirs. *Journal of Porous Media*, v. 28, no. 8, 23-43.
6. Dwier, S.K., **Garrouch, A.A.**, and Lababidi, H.M.S., 2024. Delineation of the effective viscosity controls of diluted polymer solutions at various flow regimes, *Fluid Phase Equilibria*, v. 584, 114143, 1-11.
7. Al-Omair, O., Al-Dousari, M., Azubuike, N., and **Garrouch, A.A.**, 2023, Evaluation of the coupled impact of silicon oxide nanoparticles and low-salinity-water on the wettability alteration of Berea sandstones, *Journal of Petroleum Exploration and Development*, v. 50, no. 4, 934-943.
8. AlOmair, O., Al-Dousari, M., Azubuike, N., and **Garrouch, A.A.**, 2023, Evaluation of the impact of low-salinity water on wettability alteration and oil recovery in Berea sandstones, *Fuel*, v. 337, 1-13.
9. Khouli, R., **Garrouch, A. A.**, and Alruhaimani, F., 2023, Modeling hydraulic fracture fluid efficiency in tight gas reservoirs using non-linear regression and a back-propagation neural network, *Geosystem Engineering*, v. 26, no. 1, 12-29.
10. **Garrouch, A. A.**, Al-Mulla, Y., and Chatzis, I., 2022. Insights into the application of pressure pulsing for the cold recovery of heavy oil, *Special Topics & Reviews in Porous Media*, v. 13, no. 6, 49-64.
11. Hashem, S., AL-Bazali, T., **Garrouch, A.**, and Owayed, J., 2022. Evaluation of membrane quality and entrance pressure of oil-based mud at elevated temperatures, *Journal of Geophysics & Engineering*, v. 19, no. 4, 927-939.

12. Al-Sarraf, H., Albazali, T., and **Garrouh, A.**, 2022. Role of diffusion osmosis on the mechanical and petrophysical alterations of shale when interacting with aqueous solutions, *Geosystem Engineering*, v. 25 no. 1-2, 13-24.
13. Al-Dousari, M.M., Almudhhi, S., and **Garrouh, A.A.**, 2022, Predicting the flow zone indicator of carbonate reservoirs using NMR echo transforms, and routine open-hole log measurements: Insights from a field case study spanning extreme micro-structure properties, *Journal of Engineering Research*, v. 10, no. 1A, 330-346.
14. **Garrouh, A.A.**, and Aly, S., 2021, A dimensionally consistent connectionist model for the estimation of permeability in sandstone reservoirs using conventional and NMR log data, *Journal of Porous Media*, v. 24, no. 9, 1-19.
15. **Garrouh, A.A.**, and Al-Dousari, M.M., and Al-Sarraf, Z., 2020, A pragmatic approach for optimizing gas lift operations, *Journal of Petroleum Exploration and Production Technology*, v. 10, no. 1, 197-216.
16. **Garrouh, A.A.**, and Al-Sultan, A. A., 2019, Exploring the link between the flow zone indicator and key open-hole log measurements: an application of dimensional analysis, *Petroleum Geoscience*, v. 25, 219-234.
17. **Garrouh, A.A.**, 2018, Predicting the cation exchange capacity of reservoir rocks from complex dielectric permittivity measurements, *Geophysics*, v. 83, no. 1, MR1-MR14.
18. **Garrouh, A.A.**, and Jennings, A., 2017, A contemporary approach to carbonate matrix acidizing, *Journal of Petroleum Sciences and Engineering*, v. 158, p. 129-143.
19. Ebrahim, A., **Garrouh, A.A.**, and Lababidi, H., 2016, A structured approach to the diagnosis of formation damage caused by organic scale deposits and surface active agents, Part I: Development of a diagnostic process, *Journal of Petroleum Science and Engineering*, v. 138, p. 234-244.
20. Ebrahim, A., **Garrouh, A.A.**, and Lababidi, H., 2016, A structured approach to the diagnosis of formation damage caused by organic scale deposits and surface active agents, Part II: Development of an expert system, *Journal of Petroleum Science and Engineering*, v. 138, p. 245-252.
21. Aldousari, M., Alomair, O., and **Garrouh A.A.**, 2016, Investigating the dependence of shear wave velocity on petrophysical parameters, *Journal of Petroleum Science and Engineering*, v. 146, p. 286-296.
22. Al-Omar, O., and **Garrouh, A.A.**, 2015, A general regression model offers reliable prediction of CO₂ minimum miscibility, *Journal of Petroleum Exploration and Production Technology*, v. 6, no. 3, p. 351-365.
23. Ebrahim, A., **Garrouh, A.A.**, and Lababidi, H. 2014, Automating sandstone acidizing using a rule-based system, *Journal of Petroleum Exploration and Production Technology*, v. 4, no. 4, p. 381-396.
24. Al-Dousari, M.M., and **Garrouh, A.A.**, 2013, An artificial neural network model for predicting the recovery performance of surfactant polymer floods, *Journal of Petroleum Sciences & Engineering*, v. 109, September issue, p. 51-62.
25. Al-Omar, O., and **Garrouh, A.A.**, 2010, Classifying rock lithofacies using petrophysical data, *Journal of Geophysics & Engineering*, v. 7, p. 302-320.
26. **Garrouh, A.A.**, Alsafran, E.M., and Garrouh, K.F., 2009, A classification model for rock typing using dielectric permittivity and petrophysical data, *Journal of Geophysics and Engineering*, v. 6, p. 311-323.

27. Al-Dousari, M.M., **Garrouch, A.A.**, and Guedouar, L., 2009, Analysis of the convective dispersive transport in porous media, *Journal of Petroleum Sciences & Engineering*, v. 66, no. 1-2, p. 15-23.
28. **Garrouch, A.A.**, and Al-Dousari, M.M., 2007, Applying the finite-volume method for solving the convection-dispersion equation in radial coordinates, *International Journal of Petroleum Science and Technology*, v. 1, no.1, p. 75-97.
29. **Garrouch, A.A.**, and Malallah, A.H., 2007, An empirical model for predicting crude sludging potential caused by acidizing, *International Journal of Petroleum Science and Technology*, v. 1, no.1., p. 23-36.
30. **Garrouch, A. A.**, and Al-Ruhaimani, F.A., 2005, Simple models for permeability impairment in reservoir rocks caused by asphaltene deposition: *Journal of Petroleum Sciences & Technology*, v. 23, no. 7&8, p. 811-826.
31. **Garrouch, A. A.**, Lababidi, H.M.S., and Ebrahim, A.S., 2005, A web based expert system for the planning and completion of multilateral wells: *Journal of Petroleum Sciences & Engineering*, v. 49, no. 3&4, p. 162-181.
32. **Garrouch, A. A.**, Lababidi, H.M.S., and Ebrahim, A.S., 2004, An integrated approach for the planning and completion of horizontal and multilateral wells: *Journal of Petroleum Sciences & Engineering*, v. 44, no. 3-4, p. 283-301.
33. Lababidi, H.M.S., **Garrouch, A. A.**, and Fahim, M.A., 2004, A fuzzy heuristic approach for predicting asphaltene precipitation potential: *Energy and Fuels*, v.18, no. 1., p. 242-250.
34. **Garrouch, A. A.**, and Ebrahim, A.S., 2004, Analysis of the mechanical stability of boreholes drilled in sedimentary rocks: *Journal of Petroleum Sciences & Technology*, v. 22, no. 11&12, p. 1535-1551.
35. **Garrouch, A. A.**, and Lababidi, H.M.S., 2001, Development of an expert system for underbalanced drilling using fuzzy logic: *Journal of Petroleum Sciences & Engineering*, v.31, no.1, p. 23-39.
36. **Garrouch, A. A.**, Liaqat Ali, and Qasem, F., 2001, Using diffusion and electrical measurements to assess tortuosity of porous media: *Industrial & Engineering Chemistry Research*, v. 40, no. 17, p. 4363-4369.
37. **Garrouch, A. A.**, 2001, A novel analysis of the electrical transport in porous media: *Transport in Porous Media*, v. 44, no. 3, p. 559-575.
38. **Garrouch, A. A.**, and Liaqat Ali, 2001, Predicting the onset of inertial effects in sandstone rocks: *Transport in Porous Media*, v. 44, no. 3, p. 487-505.
39. Gharbi R.B., and **Garrouch, A. A.**, 2001, The performance of miscible enhanced oil recovery displacements in geostatistically generated permeable media using horizontal wells: *Journal of Porous Media*, v. 4, no. 2, p. 113-126.
40. **Garrouch, A.A.**, 1999, A modified Leverett J-function for the Dune and Yates carbonate fields: A case study: *Energy and Fuel*, v. 13, no. 5, p. 1021-1029.
41. **Garrouch, A. A.**, 1999, A systematic study revealing resistivity dispersion in porous media: *The Log Analyst*, v. 40, no. 4, p. 271-279.
42. **Garrouch, A. A.**, Liaqat Ali, 1999, Adapting the type-curve approach for estimating reservoir rock permeability: *In Situ*, v. 23, no. 3., p. 223-242.
43. **Garrouch, A. A.**, and Gharbi, R.B., 1999, An empirical investigation of polymer flow in porous media: *Industrial & Engineering Chemistry Research*, v. 38, no. 9, 3564-3571.

44. **Garrouh, A. A.**, and Sharma, M. M., 1998, Dielectric dispersion of partially saturated porous media in the frequency range 10 Hz to 10 MHz: *The Log Analyst*, v. 39, no. 3, p. 48-53.
45. **Garrouh, A. A.**, 1997, Use of the saturation exponent as a measure for quantifying reservoir rock wettability: *In Situ*, v. 20, no. 4, p. 413-438.
46. Smaoui, N., and **Garrouh, A. A.**, 1997, A new approach combining Karhunen-Loeve decomposition and artificial neural network for estimating tight gas sand permeability: *Journal of Petroleum Sciences & Engineering*, v. 18, no. 1/2, p. 101-112.
47. Gharbi, R. B., Peters, E., and **Garrouh, A. A.**, 1997, Effect of heterogeneity on the performance of immiscible displacement with horizontal wells: *Journal of Petroleum Science & Engineering*, v. 18, no. 1/2, p. 35-47.
48. **Garrouh, A. A.**, Lababidi, H.M.S., and Gharbi, R.B., 1996, Dielectric dispersion of dilute suspensions of colloid particles: Practical Applications: *The Journal of Physical Chemistry*, v.100, no. 42, p. 16996-17003.
49. **Garrouh, A. A.**, and Smaoui, N., 1996, Application of artificial neural network for estimating tight gas sand intrinsic permeability: *Energy and Fuel*, v.10, no.5, p. 1053-1059.
50. **Garrouh, A. A.** and Lababidi, H.M.S., 1995, An inverted petrophysical model for shaly sands: *In Situ*, v.19, no.2, p. 125-153.
51. **Garrouh, A. A.**, and Sharma, M. M., 1994, The influence of clay content, salinity, stress and wettability on the dielectric properties of brine-saturated rocks: 10 Hz to 10 MHz: *Geophysics*, v. 59, no. 6, p. 909-917.
52. Sharma, M. M., **Garrouh, A. A.**, and Dunlap, H. F., 1991, Effects of wettability, pore geometry, and stress on electrical conduction in fluid-saturated rocks: *The Log Analyst*, v.32, no. 5, p. 511-526.

CONFERENCES

1. Abdullah, M., and Garrouh, A. A., 2019, A new approach for rock typing using dimensional analysis, paper SPE 198026-MS, presented at the fourth Kuwait Oil and Gas Show and Conference, Kuwait City, Kuwait, October 13-16.
2. Garrouh, A.A, 2018, Development of an empirical model for predicting the cation exchange capacity of shaly sandstones using complex dielectric permittivity measurements. Manuscript no. 104, Oral presentation at the Springer Conference of the Arabian Journal of Geosciences, Hammamet, Tunisia, November 12-15.
3. Garrouh, A.A., Ebrahim, A., and Lababidi, H. 2015, Automating sandstone acidizing using a rule-based system, Oral presentation at the World Congress on Petrochemistry and Chemical Engineering, Atlanta, Georgia, USA, November 30-December 2.
4. Garrouh, A.A., and Aldousari, M., 2013, Predicting the recovery performance of surfactant polymer floods, Oral presentation at the World Congress on Petrochemistry and Chemical Engineering, San Antonio, Texas, November 18-20.
5. Garrouh, A.A., Alsafran, E.M., Garrouh, K.F., 2008, An empirical model for estimating the rock lithology and the cation exchange capacity from dielectric permittivity data, paper SPE 113752, presented at the SPE Annual Technical Conference and Exhibition, Denver, Colorado, September 21-24.
6. Garrouh, A.A., 2007, Economic viability of gas-to-liquid technology, paper SPE 107274-PP, presented at the SPE Hydrocarbon Economics and Evaluation Symposium, Dallas, Texas, April 1-3.

7. Garrouch, A.A., and Gharbi, R.B., 2006, A novel model for viscoelastic fluid flow in porous media, paper SPE 102015-PP, presented at the Annual Technical Conference and Exhibition, San Antonio, Texas, September 24-27.
8. Garrouch, A.A., Malallah, A.H., and AlEnizy, M.M., 2006, A comprehensive system for diagnosing and assessing formation damage, paper SPE 99277-PP, in the 15th EUROPEC Biennial Conference and Exhibition, Vienna, Austria, June 12-15.
9. Garrouch, A.A., Guedouar, L., and Aldousari, M.M., 2006, A novel approach for analyzing the dispersion transport in radial coordinates, paper SPE 99516-PP, in the SPE Western Regional/AAPG Pacific Section/GSA Cordilleran Section Joint Meeting, Anchorage, Alaska, May 8-10.
10. Garrouch, A.A., 2006, A comparison between US and Middle Eastern Petroleum Engineering Curricula and Assessment Methods in PE programs, Oral presentation, Middle East Colloquium on Petroleum Engineering Education, Grosvenor House Hotel, Dubai, February 12-15.
11. Garrouch, A.A., and Lababidi, H.M.S., 2005, Implementation of a fuzzy expert system for multilateral well completion: case studies, paper SPE 93930-PP, presented at the 14th EUROPEC Biennial Conference and Exhibition, Madrid, Spain, June 13-16.
12. Garrouch, A.A., and Al-Ruhaimani, F.A., 2005, Modeling permeability reduction caused by asphaltene deposition, paper SPE 96697-PP, in the SPE Annual Conference and Exhibition, Dallas, Texas, October 9-12.
13. Garrouch, A.A., Lababidi, H.M.S., and Ebrahim, A., 2004, A fuzzy expert system for the completion of multilateral wells, paper SPE 87963, presented at the IADC/SPE Asia Pacific Drilling Technology Conference and Exhibition, Kuala-Lumpur, Malaysia, September 13-15.
14. Garrouch A.A., and Ali, Liaqat, 2003, Development of a type-curve technique for estimating rock permeability using capillary-pressure data, paper SCA 2003-42, International Symposium of the Society of Core Analysts, Pau, France, September 22-25.
15. Garrouch, A.A., and Lababidi, H.M.S., 2003, Using fuzzy logic for UBD Candidate selection, paper SPE 81644, IADC/SPE Underbalanced Technology Conference, Houston, Texas, March 25-26.
16. Garrouch, A.A., and Al-Ruhaimani, F.A., 2003, Predicting asphaltene deposition and assessing formation damage, paper SPE 82258, SPE European Formation Damage Conference, The Netherlands, The Hague, May 13-14.
17. Garrouch, A.A., Lababidi, H.M.S., and Ebrahim, A., 2003, A novel expert system for multilateral well completion, paper SPE 83474, SPE Western Regional Pacific Section Joint Meeting, Long Beach, California, May 19-24.
18. Lababidi, H.M.S., and Garrouch, A.A., 2002, An expert system for predicting asphaltene deposition and assessing formation damage, paper SPE 73744, presented at the SPE International Symposium & Exhibition on Formation Damage Control, Lafayette, Louisiana, February 20-21.
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MEMBERSHIP IN PROFESSIONAL SOCIETIES

Society of Petroleum Engineers (SPE)
 Society of Core Analysts (SCA)
 Society of Professional Well Log Analysts (SPWLA)

GOOGLE SCHOLAR INFORMATION

<https://scholar.google.com/citations?hl=en&pli=1&user=vnJxDgcAAAAJ>

LANGUAGES SKILLS – SPOKEN AND WRITTEN

English: Advanced French: Advanced Arabic: Advanced

HONORS & AWARDS

- Kuwait University, Research Administration Unfunded Research Award (2018; 2023).
- Organization of Arab Petroleum Exporting Countries (OAPEC) Excellence Prize for best research (2006).
- Teaching Excellence Award from Kuwait University (2003).