

CURRICULUM VITAE
Jamal H. Abou-Kassem
Professor of Petroleum Engineering
Chemical and Petroleum Engineering
College of Engineering
The UAE University

BIOGRAPHICAL SKETCH

Jamal H. Abou-Kassem is professor of petroleum engineering at the UAE University in the United Arab Emirates, where he has taught since 1993. Before joining the UAE University, he was associate professor of petroleum and natural gas engineering at The Pennsylvania State University (1985-1992), where he was a tenured faculty member, supervised to completion two MS and two PhD students, and served on 10 thesis advisory committees. He held posts with the Research Institute of KFUPM (1981-1984) in Saudi Arabia and PanCanadian Petroleum Ltd. (1978-1979) in Canada. He received BSc (Cairo U., Egypt, 1970) and MSc (U. of Alberta, Canada, 1975) degrees in petroleum engineering, and earned PhD degree in reservoir simulation from the U. of Calgary (Canada) in 1981. He is a co-author of two textbooks: Basic Applied Reservoir Simulation (SPE, 2001) and Petroleum Reservoir Simulation: A Basic Approach (Gulf Publishing Company, 2006), and a reference book, Advanced Petroleum Reservoir Simulation (Scrivener Publishing-Wiley, 2010), author/co-author of 32 technical articles in first class journals, and another 12 technical articles in symposium proceedings. **His areas of expertise cover reservoir simulation, thermal and polymer EOR methods, fluid flow through porous media, and fundamental properties of natural gas.** He has attended and presented numerous technical papers in international, regional, and local petroleum engineering symposiums. He has 29 years of experience in academia, research organizations, and petroleum industry. He is a Canadian citizen and is a member of SPE.

PERSONAL DATA

Date of Birth: March 15, 1946
 Citizenship: Canadian
 Marital Status: Married with seven children
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OBJECTIVES

1. Interact with students both at the graduate and undergraduate levels and enrich their learning, research creativity, and career development;
2. Direct and conduct research in the areas of reservoir simulation, EOR methods, gas properties, fluid flow through porous media, and solution methods of finite-difference equations;
3. Develop reservoir simulators for practical field applications and post processor for interpretation of simulation results using MATLAB.

4. Serve society through the transfer of technology and providing services to industry.

ACADEMIC QUALIFICATIONS

- 6/1981 PhD, Reservoir Simulation, the University of Calgary, Calgary, Canada
- 5/1975 MS, Petroleum Engineering, the University of Alberta, Edmonton, Canada
- 8/1970 BS, Petroleum Engineering, Cairo University, Cairo, Egypt

ACADEMIC AND INDUSTRIAL EXPERIENCE

The UAE University, Al-Ain, UAE

- 5/2000-present Professor of Petroleum Engineering
- 9/1993-4/2000 Associate Professor of Petroleum Engineering

The Pennsylvania State University, University Park, PA 16802, USA

- 7/1991-1/1992 Associate Professor of Petroleum and Natural Gas Eng.
- 8/1985-6/1991 Assistant Professor of Petroleum and Natural Gas Engineering.

KFUPM Research Institute, Dhahran, Saudi Arabia

- 6/1981-8/1984 Associate Research Engineer

Pan Canadian Petroleum Ltd., Calgary, Alberta, Canada

- 9/1978-9/1979 Simulation Engineer III

RESEARCH, SCHOLARLY, AND CREATIVE ACTIVITIES

Books

1. Islam, M.R., Moussavizadegan, S.H., Mustafiz, S., and Abou-Kassem, J.H.: *Advanced Petroleum Reservoir Simulation*, Scrivener-Wiley, 486 pp. (April 2010).
2. Abou-Kassem, J.H., Farouq Ali, S.M., and Islam, M.R.: *Petroleum Reservoir Simulation: A Basic Approach*, Gulf Publishing Company, Houston, TX. 445 pp. (March 2006).
3. Ertekin, T., Abou-Kassem, J.H., and King, G.: *Basic Practical Reservoir Simulation*, SPE Textbook Series Vol. 7, Society of Petroleum Engineers, Richardson, TX. 406 pp. (September 2001).

Selected Articles Published in Refereed Journals

4. Zekri, A.Y., Abou-Kassem, J.H., and Shedid, A.S.: "A New Technique for Measurement of Oil Biodegradation," *J. Pet. Sci. Tech.*, **27**: pp. 666-677. (2009).
5. Abou-Kassem, J.H.: "Reconstruction of the Compositional Reservoir Simulator Using the Engineering Approach," *J. Nature Science & Sustainable Technology*, **2** (1/2): pp. 37-109. (2008).
6. Abou-Kassem, J.H. and Osman, M.E.: "An Engineering Approach to the Treatment of Constant Pressure Boundary Condition in Block-Centered Grid in Reservoir Simulation," *J. Pet. Sci. Tech.*, **26**: pp. 1187-1204. (2008).
7. Abou-Kassem, J.H.: "The Engineering Approach versus the Mathematical Approach in Developing Reservoir Simulators," *J. Nature Science & Sustainable Technology*, **1** (1):pp. 35-67. (2007).

8. Abou-Kassem, J.H., Osman, M.E., Mustafiz, S., and Islam, M.R.: "New Simple Equations for Interblock Geometric Factors and Bulk Volumes in Single-Well Simulation," *J. Pet. Sci. Tech.*, **25**: pp. 615-630. (2007).
9. Shedid, S.A., Abou-Kassem, J.H., and Zekri, A.Y.: "Mechanical Cleaning of Oil Spills in Seawater Using Circular Conduits," *Energy Sources*, **27** (13): pp. 1257-1268. (2005).
10. Al-Awadhy, F., Kocabas, I., Abou-Kassem, J.H., and Islam, M.R.: "Experimental and Numerical Modeling of Sulfur Plugging in a Carbonate Oil Reservoir," *Energy Sources*, **27** (1 & 2): pp. 3-18. (2005).
11. Abou-Kassem, J.H.: "Experimental and Numerical Modeling of Sulfur Plugging in Carbonate Reservoirs," *J. Pet. Sci. Eng.*, **26** (1-4): pp. 91-103. (2000).
12. Abou-Kassem, J.H. and Osman, M.E., Zaid, A.M.: "Architecture of a Multipurpose Simulator," *J. Pet. Sci. Eng.*, **16**: pp. 221-235. (1996).
13. Abou-Kassem, J.H.: "Practical Considerations in Developing Numerical Simulators for Thermal Recovery," *J. Pet. Sci. Eng.*, **15**: pp. 281-290. (1996).
14. Abou-Kassem, J.H. and Farouq Ali, S.M.: "Modeling of Emulsion Flow in Porous Media," *J. Can. Pet. Tech.*, **34** (6): 30-38. (1995).
15. Abou-Kassem, J.H. and Ertekin, T.: "An Efficient Algorithm for Removal of Inactive Blocks in Reservoir Simulation," *J. Can. Pet. Tech.*, **31** (2): pp. 25-31. (1992).
16. Luchmansingh, P.M., Ertekin, T., and Abou-Kassem, J.H.: "Development and Application of a Highly Implicit Multi-Dimensional Polymer Injection Simulator," *AIChE Symposium Series*, **87** (280): pp. 112-122. (1991).
17. Hansamuit, V. and Abou-Kassem, J.H.: "Performance of Steam Injection Processes Using Vertical and Horizontal Wells," *AIChE Symposium Series*, **87** (280): pp. 10-19. (1991).
18. Abou-Kassem, J.H., Ertekin, T., and Lutchmansingh, P.M.: "Three-Dimensional Modeling of One-Eighth of Confined Five- and Nine-Spot Patterns," *J. Pet. Sci. Eng.*, **5**: pp. 137-149. (1991).
19. Abou-Kassem, J.H., Mattar, L., and Dranchuk, P.M.: "Computer Calculations of Compressibility of Natural Gas," *J. Can. Pet. Tech.*, **29** (5): pp. 105-108. (1990).
20. Abou-Kassem, J. H. and Aziz, K.: "Handling of Phase Change in Thermal Simulators," *J. Pet. Tech.*, **37** (10): pp. 1661-1663. (1985).
21. Abou-Kassem, J.H. and Aziz, K.: "Analytical Well Models for Reservoir Simulation," *Soc. Pet. Eng. J.*, **25** (4): pp. 573-579. (1985).
22. Abou-Kassem, J.H. and Aziz, K.: "Sensitivity of Steam Flood Model Results to Grid and Time Step Sizes," *Soc. Pet. Eng. J.*, **24** (1): pp. 65-74. (1984).
23. Dranchuk, P.M. and Abou-Kassem, J.H.: "Calculation of z Factors for Natural Gases Using Equations of State," *J. Can. Pet. Tech.*, **14** (3): pp. 34-36. (1975).

Active Research Projects

1. Boosting the UAE oil production using high performance computer streaming and grid infrastructure.
2. Treatment of reservoir boundary conditions in 3D rectangular for field simulation and radial-cylindrical reservoirs for single-well simulation.