

Contact Details



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Education

Date	Degree	Field	University	Location
2006-2011	PhD	Petroleum Eng.	Sharif University of Technology	Tehran/Iran
2004_2006	MSc	Petroleum (Reservoir) Eng.	Sharif University of Technology	Tehran/Iran
2000_2004	BSc	Chemical Eng.	Sharif University of Technology	Tehran/Iran

Research Interests

- Digital core analysis and pore-scale modeling
- Formation characterization by artificial intelligence and machine learning
- EOR by polymer flooding (PPGs, pH-sensitive polymers, smart polymers)

Honors/Awards

- Alexander von Humboldt Fellowship for Experienced Researchers at Geoscience institute (Institut für Geowissenschaften), Johannes Gutenberg-Universität Mainz, Germany (2020-2022).
- Certificate of Dr. Mojtahedi for PhD thesis, innovation award for distinguished innovation in research and education, Sharif University of Technology (2010).
- Ranked 1st among the PhD students of the chemical and petroleum engineering department at Sharif University of Technology (2010).

Publications

Book Chapters:

- Sadeghnejad, S., Ashrafizadeh, M., & Nourani, M. (2022). Improved oil recovery by gel technology: Water shutoff and conformance control. In *Chemical Methods* (pp. 249-312). Gulf Professional Publishing.
- Nourani, M., & Sadeghnejad, S. (2022). Alkaline-surfactant polymer (ASP). In *Chemical Methods* (pp. 221-247). Gulf Professional Publishing.

Journal Papers:

1. Sadeghnejad, S., Reinhardt, M., Enzmann, F., Arnold, P., Brandstätter, B., Ott., H., Wilde, F., Hupfer, S., Shaefer, T. & Kersten, M. (2023). Minkowski functional evaluation of representative elementary volume of rock microtomography images at multiple resolutions. *Advances in Water Resources*, 179, 104501.
2. Mousavi, S. M., Bakhtiarimanesh, P., Enzmann, F., Kersten, M., & Sadeghnejad, S. (2023). Machine-Learned Surrogate Models for Efficient Oil Well Placement Under Operational Reservoir Constraints. *SPE Journal*, 1-20.
3. Jamshidi Gohari, M. S., Emami Niri, M., Sadeghnejad, S., & Ghiasi-Freez, J. (2023). Synthetic Graphic Well Log Generation Using an Enhanced Deep Learning Workflow: Imbalanced Multiclass Data, Sample Size, and Scalability Challenges. *SPE Journal*, 1-20.
4. Tajikmansori, A., Dehaghani, A. H. S., Sadeghnejad, S., & Haghghi, M. (2023). New insights into effect of the electrostatic properties on the interfacial behavior of asphaltene and resin: An experimental study of molecular structure. *Journal of Molecular Liquids*, 377, 121526.
5. Koochakzadeh, A., Teimouri, A., Tohidi, E., Ashrafizadeh, M., Enzmann, F., Kersten, M., & Sadeghnejad, S. (2023). Review on using pH-sensitive microgels as enhanced oil recovery and water shutoff agents: Concepts, recent developments, and future challenges. *Geoenergy Science and Engineering*, 211477.
6. Sadeghnejad, S., Enzmann, F., & Kersten, M. (2022). Numerical simulation of particle retention mechanisms at the sub-pore scale. *Transport in Porous Media*, 145, 127-151.
7. Karimi, A., & Sadeghnejad, S. (2022). Pore-scale reconstruction of tight reservoirs using generative adversarial networks. *Journal of Petroleum Research*, 32(126), 83-94.

8. Reinhardt, M., Jacob, A., Sadeghnejad, S., Cappuccio, F., Arnold, P., Frank, S., Enzmann, F. & Kersten, M. (2022). Benchmarking conventional and machine learning segmentation techniques for digital rock physics analysis of fractured rocks. *Environmental Earth Sciences*, 81(3), 1-20.
9. Younesian-Farid, H., & Sadeghnejad, S. (2022). The Effect of Carbonate Cement Type on Sandstone Matrix Acidizing. *Journal of Chemical and Petroleum Engineering*, 56(2), 189- 202.
10. Mehrooz, N., Gharibshahi, R., Jafari, A., Delavari, H., & Sadeghnejad, S. (2022). Low-temperature in-situ synthesis of cerium oxide nanoparticles applicable in EOR processes: parametric study by Taguchi approach. *Journal of Petroleum Science and Engineering*, 219, 111078.
11. Mehrooz, N., Gharibshahi, R., Jafari, A., Delavari, H., & Sadeghnejad, S. (2022). Effect of In-Situ Synthesized Cerium Oxide Nanoparticles on Oil Recovery Factor In a Glass Micromodel. *Journal of Applied Research of Chemical-Polymer Engineering*, 6(2), 3-14.
12. Sadeghnejad, S., Enzmann, F., & Kersten, M. (2021). Digital rock physics, chemistry, and biology: challenges and prospects of pore-scale modelling approaches. *Applied Geochemistry*, 131.
13. Tohidi, E., & Sadeghnejad, S. (2021). Geochemical modelling of acid injection in high salinity sandstones at reservoir conditions. *Oil & Gas Science and Technology–Revue d’IFP Energies nouvelles*, 76, 79.
14. Karimi, A. M., Sadeghnejad, S., & Rezghi, M. (2021). Well-to-well correlation and identifying lithological boundaries by principal component analysis of well-logs. *Computers & Geosciences*, 157, 104942.
15. Mousavi, S. M., Sadeghnejad, S., & Ostadhassan, M. (2021). Evaluation of 3D printed microfluidic networks to study fluid flow in rocks. *Oil & Gas Science and Technology–Revue d’IFP Energies nouvelles*, 76, 50.
16. Moslemipour, A., Sadeghnejad, S. (2021) Dual-scale pore network reconstruction of vugular carbonates using multi-scale imaging techniques. *Advances in water resources*, 147, 103795.
17. Koochakzadeh, A., Younesian-Farid, H., & Sadeghnejad, S. (2021). Acid pre-flushing evaluation before pH-sensitive microgel treatment in carbonate reservoirs: Experimental and numerical approach. *Fuel*, 297, 120670.
18. Farasat, A., Younesian-Farid, H., Sadeghnejad, S. (2021) Conformance control study of preformed particle gels (PPGs) in mature waterflooded reservoirs: numerical and experimental investigations. *Journal of Petroleum Science and Engineering*, 203, 108575.
19. Saeedi Dehaghani, A. H., Sadeghnejad, S., Soltaninejad, M., & Tajikmansori, A. (2021). Estimation of Total Organic Carbon in Source Rocks by Using Back-propagation Artificial Neural Network and Passay Method-A Case Study. *Journal of Chemical and Petroleum Engineering*, 55(2), 277-292.
20. Sadeghnejad, S., Gostick, J. (2020). Multi-scale reconstruction of vuggy carbonates by pore network modeling and image-based technique, *SPE Journal*, 25 (1), 253-267.
21. Teimouri, A., Sadeghnejad, S., & Dehaghani, A. H. S. (2020). Investigation of acid pre-flushing and pH-sensitive microgel injection in fractured carbonate rocks for

- conformance control purposes. *Oil & Gas Science and Technology–Revue d'IFP Energies nouvelles*, 75, 52.
22. Faramarzi, N., & Sadeghnejad, S. (2020). Fluid and rock heterogeneity assessment of gas condensate reservoirs by wavelet transform of pressure-transient responses. *Journal of Natural Gas Science and Engineering*, 81, 103469.
 23. Younesian-Farid, H., Sadeghnejad, S. (2020). Modeling geochemical reactions of citric acid with ankerite cement during sandstone matrix acidizing. *Journal of Petroleum Science and Engineering*, 185, 106650.
 24. Safavi, M. S., Masihi, M., Safekordi, A. A., Ayatollahi, S., & Sadeghnejad, S. (2020). Investigation of rock and fluid interactions during engineered water flooding in dolomite reservoir rocks. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 1-19.
 25. Ashrafizadeh, M., Tam, K. C., Javadi, A., Abdollahi, M., Sadeghnejad, S. & Bahramian, A. (2020). Dual Physically and Chemically Cross-Linked Polyelectrolyte Nanohydrogels: Compositional and pH-Dependent Behavior Studies. *European Polymer Journal*, 122, 109398.
 26. Safavi, M. S., Masihi, M., Safekordi, A. A., Ayatollahi, S., & Sadeghnejad, S. (2020). Effect of SO_4^{2-} ion exchanges and initial water saturation on low salinity water flooding (LSWF) in the dolomite reservoir rocks. *Journal of Dispersion Science and Technology*, 41(6), 841-855.
 27. Soltani, P., Sadeghnejad, S., Dehaghani, A. H. S. (2019). Quantitative monitoring of cleaning time and wettability alteration of carbonate rocks during Soxhlet cleaning, *SPE Reservoir Evaluation & Engineering-Formation Evaluation*, 22(4), 1334–1345.
 28. Sadeghnejad, S., Manteghian, M., Roozsaz, H. (2019). Simulation optimization of water alternating gas (WAG) process under operational constraints: a case study in the Persian Gulf, *Scientia Iranica*, 26 (6), 3431-3446.
 29. Younesian-Farid, H., Sadeghnejad, S. (2019) Geochemical performance evaluation of pre-flushing of weak and strong acids during pH-triggered polymer flooding. *Journal of Petroleum Science and Engineering*, 174, 1022-1033.
 30. Azimi Dijejin Z., Ghaffarkhab A., Sadeghnejad S., Vafaie Sefti M. (2019) Effect of silica nanoparticle size on mechanical strength and wellbore plugging performance of SPAM/Chromium (III) acetate nanocomposite gels, *Polymer Journal-Nature*, 51, 693-707.
 31. Farhoodi, S., Sadeghnejad, S., Dehaghani, A. H. S. (2019). Simultaneous effect of geological heterogeneity and condensate blockage on well test response of gas condensate reservoirs. *Journal of Natural Gas Science and Engineering*, 66, 192-206.
 32. Ashrafizadeh, M., Tam, K. C., Javadi, A., Abdollahi, M., Sadeghnejad, S., & Bahramian, A. (2019). Synthesis and physicochemical properties of dual-responsive acrylic acid/butyl acrylate cross-linked nanogel systems. *Journal of colloid and interface science*, 556, 313-323.
 33. Partovi A., Sadeghnejad S. (2019) Geological Boundary Detection from Well-logs: An Efficient Approach based on Pattern Recognition, *Journal of Petroleum Science and Engineering*, 176, 444-455.
 34. Soltani, A., & Sadeghnejad, S. (2018) Scaling and critical behavior of lattice and continuum porous media with different connectivity configurations. *Physica A: Statistical Mechanics and its Applications*, 508, 376-389.

35. Khoshneshin, R., Sadeghnejad, S. (2018) Integrated Well Placement and Completion Optimization using Heuristic Algorithms: A Case Study of an Iranian Carbonate Formation. *Journal of Chemical and Petroleum Engineering*, 52 (1), 35-47.
36. Partovi A., Sadeghnejad S. (2018) Reservoir Rock Characterization Using Wavelet Transform and Fractal Dimension, *Iranian Journal of Chemistry and Chemical Engineering*, 37 (3), 223-233.
37. Farasat A., VafaieSefti M., Sadeghnejad S., Saghafi H.R. (2017) Mechanical entrapment analysis of enhanced preformed particle gels (PPGs) in mature reservoirs, *Journal of Petroleum and Engineering*, 157, 441-450.
38. Partovi S.M.A., Sadeghnejad S. (2017) Fractal parameters and well-logs investigation using automated well-to-well correlation, *Computers & Geosciences*, 103, 59-69.
39. Sadeghnejad S., Masihi M. (2017) Analysis of a more realistic well representation during secondary recovery in 3-D continuum models, *Computational Geosciences*, 21, 1035-1048.
40. Ashrafizadeh M., Ramazani A., Sadeghnejad S. (2017) Enhanced polymer flooding using a novel nano-scale smart polymer: experimental investigation, *The Canadian Journal of Chemical Engineering*, 95, 2168-2175.
41. Montazeri M., Sadeghnejad S. (2017) An Investigation of Optimum Miscible Gas Flooding Scenario: A Case Study of an Iranian Carbonates Formation, *Iranian Journal of Oil & Gas Science and Technology* 6 (3), 41-54.
42. Farasat A., VafaieSefti M., Sadeghnejad S., Saghafi H.R. (2017) The Effects of reservoir temperature and salinity on the swelling ratio performance of enhanced preformed particle gels, *Korean Journal of Chemical Engineering*, 34 (5), 1509-1516.
43. Sadeghnejad S., Masihi M. (2016) Point to point continuum percolation in two dimensions, *Journal of Statistical Mechanics: Theory and Experiment*, 2016 (10), 103210.
44. Kariman A., Sadeghnejad S., Jafarai A. (2015) Simulation of polymer flooding process in a fractured micromodel containing heavy oil, *Petroleum Research* 25 (83), 4-15.
45. Sadeghnejad S., Masihi M., Pishvaie M., King P.R. (2013) Rock Type Connectivity Prediction Using Percolation Theory, *Mathematical Geosciences* 45(3), 321-340.
46. Sadeghnejad S., Masihi M., King P.R. (2013), Dependency of percolation critical exponents on the exponent of power law size distribution, *Physica A: Statistical Mechanics and its Applications* 392(24), 6189-6197.
47. Ashrafizadeh M., Ramazani S.A., Sadeghnejad S. (2012) Improvement of polymer flooding using in-situ releasing of smart nano-scale coated polymer particles in porous media, *Energy Exploration and Exploitation Journal* 30(6), 915-940.
48. Sadeghnejad S., Masihi M., Shojaei A., Pishvaie M., King P.R. (2011) Field scale investigation of percolation theory in characterizing geological formation, *Transport in Porous Media* 92(2), 357-372.
49. Sadeghnejad S., Masihi M., King P.R., Shojaei A., Pishvaie M. (2010) Effect of anisotropy on the scaling of connectivity and conductivity in continuum Percolation theory, *Physical Review E* 81, 061119.
50. Sadeghnejad S., Masihi M., King P.R., Pishvaie M., Shojaei A. (2011) Utilization of Percolation approach to evaluate the reservoir connectivity and effective permeability: a case study on North Pars gas field, *Scientia Iranica, Transactions C: Chemistry and Chemical Engineering* 18(6), 1391-1396.

51. Sadeghnejad S., Masihi M., Pishvaie M., Shojaei A., King P.R. (2014) Estimating Connected Volume of Hydrocarbon During Early Reservoir Life by Percolation Theory, Energy Sources Part A: Recovery, Utilization, and Environmental Effects 36 (3), 301-308.
52. Sadeghnejad S., Masihi M., King P.R., Shojaei A., Pishvaie M. (2011) Reservoir conductivity evaluation using Percolation theory, Petroleum science and technology, 29(10), 1041-1053.
53. Sadeghnejad S., Masihi M. (2011) Water flooding performance evaluation using percolation theory, Iranian Journal of Petroleum Science and Technology 2 (1), 19-23.

Conference Papers:

1. Sadeghi, P., Moslemipour, A., Sadeghnejad, S., Enzmann, F., Haupfer, S., Schäfer, T., Kersten, M. (2023) Comparing Training Speed of Super-Resolution Convolutional Neural Networks to Enhance Digital Rock Resolutions, Interpore German Chapter Meeting, Ingolstadt, Germany.
2. Moslemipour, A., Sadeghnejad, S., Enzmann, F., Khoozan, D. & Kersten, M. (2023) Addressing Unresolved Microporosity in Multi-Scale Reconstruction of Rock Images, Interpore German Chapter Meeting, Ingolstadt, Germany.
3. Razavi Nezhad, J., Sadeghnejad, S. Khoozan, D., Schäfer, T., Moslemipour A., Enzmann, F., Kersten, M.(2023) Prediction of permeability reduction after particles deposition at the pore scale using convolutional neural networks, Interpore German Chapter Meeting, Ingolstadt, Germany.
4. Moslemipour, A., Razavi Nezhad, J., Khoozan, D., Sadeghnejad, S., Enzmann, F. & Kersten, M. (2023) Pore network extraction from multiscale images: an efficient approach based on artificial neural network, InterPore2023, Edinburgh, Scotland.
5. Shidvsh, S., Vasheghani, M., Mousavi Nezhad, M. & Sadeghnejad, S. (2023) Predicting Darcy Velocity Field of Porous Rocks using Convolutional Neural Networks, InterPore2023, Edinburgh, Scotland.
6. Moslemipour, A., Razavi Nezhad, J., Khoozan, D., Sadeghnejad, S., Enzmann, F. & Kersten, M. (2023) Image resampling: a vital prerequisite step in multi-scale modelling of heterogeneous rock samples, InterPore2023, Edinburgh, Scotland.
7. Razavi Nezhad, J., Moslemipour, A., Sadeghnejad, S., Schäfer, T, Enzmann, F. & Kersten, M. (2023) Prediction of particle deposition at the pore scale using convolutional neural networks, InterPore2023, Edinburgh, Scotland.
8. Jasek, P., Koneggrev, H., Sadeghnejad, S., Enzmann, F. Loibner, A. & Ott, H. (2023) Microfluidic study of hydrogen conversion by Archea in porous media. A pore-scale investigation of gas conversion and controlling parameters under dynamic conditions., InterPore2023, Edinburgh, Scotland.
9. Ghavami, S.Z., Khoozan, D. & Sadeghnejad, S. (Dec 2022) Classification of reservoir rocks using deep learning, 4th International Biennial Conference on Oil, Gas, and Petrochemical Engineering, Bushehr, Iran.
10. Sadeghnejad, S., Enzmann, F. & Kersten, M. (2022) Particle migration and retention mechanisms at the sub-pore scale: a numerical study, International Field Exploration & Development Conference, Urumqi, China.
11. Sadeghnejad, S., Enzmann, F. & Kersten, M. (2022) Particle migration and deposition at the pore scale: EulerianLagrangian approach, InterPore2022, Abu Dhabi, UAE.

12. Reinhardt, M., Sadeghnejad, S., Enzmann, F. & Kersten, M. (2022) Variation of the representative elementary volume (REV) in heterogeneous rocks with changing CT image resolution, InterPore2022, Abu Dhabi, UAE.
13. Hasanloo, A., Sadeghnejad, S., Nourani, M. & Rezghi, M. (2022) Stylolite detection and image classification from whole core images using convolutional neural networks, InterPore2022, Abu Dhabi, UAE.
14. Sadeghnejad, S., Enzmann, F. & Kersten, M. (2022) Microbial growth and biomass deposition modelling at the pore scale: digital rock biology, 19th Hybrid Symposium on Remediation, Friedrich Schiller University Jena, Germany.
15. Karimi, B., Moshtari, M., Sadeghnejad, S., Enzmann, F. & Kersten, M. (2021) The effect of tomographic imaging resolution on residual saturations during the drainage process, InterPore 2021, Edinburgh, UK.
16. Bakhtiarimanesh, P., Sadeghnejad, S., OstadHasan, M., Mousavi, S. M. (2021). Introduction of an Integrated Workflow for Optimal Well Placement Using Machine Learning Methods, InterPore 2021, Edinburgh, UK.
17. Moslemipour, A., Sadeghnejad, S., & Gostick, J. (2020). A hybrid image processing approach to enhance signal to noise ratio of carbonate micro CT-images, The 82th Annual EAGE Conference & Exhibition, Netherlands, Amsterdam.
18. Koochakzadeh, A., Ashrafizadeh, M., & Sadeghnejad, S. (2020). Experimental evaluation of enhanced oil recovery by pH-sensitive microgels in carbonate formations, The 82th Annual EAGE Conference & Exhibition, Netherlands, Amsterdam.
19. Mousavi, S.M., Jabbari, H., Darab, M., Nourani, M., & Sadeghnejad, S. (2020). Optimal well placement using machine learning methods: multiple reservoir scenarios. SPE Norway Subsurface Conference, Norway, Bergen.
20. Sadeghnejad S., & Gostick J. (2018). Reconstruction of vugular carbonate rocks by pore network modeling and image-based network technique. In 19th International Association for Mathematical Geosciences (IAMG2018), Czech Republic, Olomouc.
21. Younesian-Farid H., Sadeghnejad S. (2018) Modeling and simulation of geochemical reactions during acid pre-flush to improve conformance control of pH-sensitive polymer flooding, 19th Annual Conference for International Association of Mathematical Geosciences (IAMG2018), 2-8 September, Olomouc, Czech Republic.
22. Younesian-Farid, H., Sadeghnejad, S, & Faramarzi, N. (2018). Simultaneous Modeling of Homogeneous and Heterogeneous Reactions to Estimate Porosity Refinement during Carbonate Acidizing. In 2nd International Biennial Oil, Gas and Petrochemical Conference, Bushehr, Iran.
23. Koochakzadeh, A., & Sadeghnejad, S. (2018). Formation Damage Analysis of Organic Acids with Limestone Rocks during Acidizing: A Case Study on an Iranian Carbonate Formation. In 2nd International Biennial Oil, Gas and Petrochemical Conference, Bushehr, Iran.
24. Faramarzi, N., Younesian-Farid, H., & Sadeghnejad, S. (2018). Characterization of condensate banks using wavelet transform analysis of well test data. In 2nd International Biennial Oil, Gas and Petrochemical Conference, Bushehr, Iran.
25. Koochakzadeh A., Sadeghnejad S. (2018) Experimental Evaluation of Geochemical Reactions of Weak Acids with Limestone Rocks from One of an Iranian Formations,

- 10th International Chemical Engineering Congress & Exhibition, 6-10 May, Isfahan, Iran.
26. Tohidi E., Sadeghnejad S., Haghtalab A. (2018) Solid particle deposition and formation damage analyses of water flooding in sandstone formations, 10th International Chemical Engineering Congress & Exhibition, 6-10 May, Isfahan, Iran.
27. Soltani P., Sadeghnejad S., Saeedi Dehaghani A.H. (2018) Wettability Alteration of Formation Rocks during Soxhlet Cleaning, 10th International Chemical Engineering Congress & Exhibition, 6-10 May, Isfahan, Iran.
28. Javahei P., Sadeghnejad S. (2017) Effect of Injection Pattern Arrangements on Formation Connectivity during Water Flooding, SPE Europec featured at 79th EAGE Annual Conference & Exhibition, 12-15 June, Paris, France.
29. Sadeghnejad S., Masihi M., King P.R., Gago P.A. (2016) Estimating EOR efficiency using percolation approach by defining realistic well trajectory, the 15th European Conference on the Mathematics of Oil Recovery (ECMOR XV), 29 August to 1 September, Amsterdam, Netherlands.
30. Sadeghnejad S., Masihi M., King P.R. (2016) Study the Connectivity of Good Sands between two Wells Represented by Two Points Using Percolation Theory, 78th EAGE Conference and Exhibition 2016, Vienna, Austria.
31. Roozsaz H., Manteghian M., Sadeghnejad S. (2015) Investigation of operational constraints on improving the recovery of water alternative gas injection (WAG) in an Iranian offshore field using simulated annealing method, The 17th annual conference of the International Association for Mathematical Geosciences (IAMG), 3-5 September, Freiberg, Germany.
32. Sadeghnejad S., Partovi, S.M.A. (2015) Reservoir rock characterization using wavelet transform and fractal analysis, 9th international chemical engineering congress and exhibition (ICHEC 2015), 26-28 December, Shiraz, Iran.
33. Farasat A., VafaeiSefti M., Sadeghnejad S., Saghafi H.R. (2015) Experimental Evaluation of the Effects of Temperature and Water Salinity on the Swelling Ratio of Performed Particle Gels, the 9th international chemical engineering congress and exhibition (ICHEC 2015), 26-28 December, Shiraz, Iran.
34. Khoshneshin R., Sadeghnejad S., Badizad M.H., Investigation of well key parameters during gas injection with implementation of multi-segment well approach, the 9th international chemical engineering congress and exhibition (ICHEC 2015), 26-28 December, Shiraz, Iran.
35. KarimanMoghadam A., Sadeghnejad S. (2015) Investigation and sensitivity analysis of different key parameters of immiscible CO₂ injection in one of the Iranian dual porosity fractured reservoir, 1st National conference of development of oil and gas fields, Tehran, Iran, 28-29 January.
36. GhannadDezfuli M., Jafari A., Barkhordari V., Sadeghnejad S. (2015) CFD investigation of nanoparticles effect on the oil recovery using supercritical CO₂, the 2nd Iranian student chemistry conference, 6-8 October, Rasht, Iran.
37. Sadeghnejad S., Masihi M. (2011) Evaluation of breakthrough and post breakthrough behavior using percolation theory at early stage of reservoir life, The 7th International Chemical Engineering Congress & Exhibition (IChEC 2011), Kish, Iran, 21-24 November.
38. Ashrafizadeh M., Sadeghnejad S., Ramezani S.A. (2011) Simulation of Dissolution Process of Hydrophobic Coated Core-Shell Particles in Interface of Two Immiscible

- Fluids, The 7th International Chemical Engineering Congress & Exhibition (IChEC 2011), Kish, Iran, 21-24 November.
39. Sadeghnejad S., Masihi M., King P.R., Shojaei A., Pishvaei M. (2011) Estimating reservoir connectivity and effective permeability during early reservoir life by percolation theory and case study, 73rd EAGE Conference & Exhibition incorporating SPE EUROPEC 2011, Vienna, Austria, 23-26 May.
 40. Ashrafzadeh M., Sadeghnejad S., Ramezani S.A. (2011) Modeling of dissolving of nano-core-shell particles in two phase viscosity prediction during polymer flooding, Polymer Processing Society (PPS2011), Asia/Australia Regional Meeting, Kish Island, Iran, 15-17 November.
 41. Ashrafzadeh M., Sadeghnejad S., Ramezani S.A. (2011) Dissolution Modeling of Smart Nano-Scale Coated Polymer Particles in Polymer Flooding process, European Polymer Congress (EPF2011), Granada, Spanish, 21 June-1 July.
 42. Sadeghnejad S., Masihi M., Pishvaei M., Shojaei A., King P.R., (2010) Reservoir Connectivity and Permeability Prediction: Analysis and Case Study, The 13th International Chemical Engineering Congress (IChEC 13) and the 1st International Regional Chemical and Petroleum Engineering Congress, 25-27 Oct, Kermanshah, Iran.
 43. Ashrafzadeh M., Ramezani S. A., Sadeghnejad S. (2011) Simulation of dissolution of nano-scale coats of Polyacrylamide particles in polymer flooding, 2nd conference on application of nano technology in science, technology and medicine (NTC2011), Islamic Azad University, Mashhad, Iran, 16-17 May.
 44. Mohammadi M., Sadeghnejad S., Pourafshary P., Bahramian A. (2010) Modification of phase behaviour calculation in vertical two phase fluid flow modelling and its effect on composition and pressure drop estimation in wellbore, 19th international congress of chemical and processing engineering (CHISA 2010), Prague, Czech Republic.
 45. Mohammadi M., Sadeghnejad S., Purafshari P., Mansouri N. (2010) Effect of slip velocity on multiphase flow production in oil wells", 18th annual international conference on mechanical engineering (ISME), Sharif university of technology, Tehran, Iran.
 46. S. Sadeghnejad, Masihi M., Bazrafkan S., King P.R. (2008) Facies Connectivity and Conductivity Modeling, International Conference of Computational Methods in Water resources, California, 6-9 July.
 47. Sadeghnejad S., Masihi M. (2008) Reservoir Connectivity of overlapping ellipsoid sandbodies, 5th International Chemical Engineering Congress (IChEC2008), Kish Island, Iran.
 48. Sadeghnejad S., Pishvaei M., Bozorgmehri R. (2007) Wavelet Transform and Petroleum Engineering" (in Persian), Exploration & Production journal, NIOC, 43, 2007, 10-16.
 49. Sadeghnejad S., Pishvaei M., Bozorgmehri R. (2006) Wavelet Transform applications in Reservoir Data Characterization, 11th chemical and petroleum engineering congress, Elmosanat university, Tehran, Iran.
 50. Sadeghnejad S., Pishvaei M., Bozorgmehri R. (2006) Wavelet Transform and Petroleum Engineering", 5th national student petroleum engineering congress, Aug 2006, Isfahan, Iran.
 51. Sadeghnejad S., Forouzanfar F. (2005) Application of Multiphase Pumps in Petroleum Industries, 4th of Petroleum Engineering Student National Conference, December 2005, Ahvaz, Iran.

52. Sadeghnejad S., Pishvaei M. (2005) Wavelet Transform Applications in Petroleum Engineering, 4th of Petroleum Engineering Student National Conference, December 2005, Ahvaz, Iran.
53. Sadeghnejad S., (2005) Cost Estimation of Production of Micronized Sulfur in a refinery and in an alone unit, 5th Student Conference of Chemical Engineering, March 2005, Tehran, Iran.

Teaching Track Record

Graduate Courses at TMU:

- ✓ Reservoir Modeling & Simulation (since 2013)
- ✓ Advanced Fractured Reservoir Engineering (since 2013)
- ✓ Advanced Pressure Transient Analysis (since 2014)
- ✓ Geostatistical Reservoir Modeling (since 2018)

Other Teaching Experiences:

- ✓ Lecturer, Advanced Fractured Reservoir Engineering, National Iranian South Oil Company (NISOC), 5-day course, Ahvaz, Iran (2018).
- ✓ Lecturer, Reservoir simulation (undergraduate), Azad University, Shiraz, Iran (2014).
- ✓ Lecturer, Measurements, Analysis, and Quality Control of SCAL data, 4 days course, National Iranian Oil Company, NIOC (2013).
- ✓ Lecturer, Well Test Analysis, Azad University, Tehran, Iran (2009).
- ✓ Lecturer, Multiphase Flow, Azad University, Tehran, Iran (2009).
- ✓ Lecturer, Software Developing, Bisotun Petrochemical Co., 5-day course, Kermanshah, Iran (2006).

Employment History

- ✓ Alexander von Humboldt fellow at Johannes Gutenberg University of Mainz (Germany) on "digital rock physics" (2020-2023).
- ✓ Steering committee of Iran InterPore Chapter (International Society for Porous Media) (Since 2023)
- ✓ Associate Professor, Department of Petroleum Engineering, Faculty of Chemical Engineering, Tarbiat Modares University, Tehran, Iran (since 2021).
- ✓ Head of the Department of Petroleum Engineering, Tarbiat Modares University, Tehran, Iran (2018-2020).
- ✓ Assistant Professor, Department of Petroleum Engineering, Faculty of Chemical Engineering, Tarbiat Modares University, Tehran, Iran (2014-2020).
- ✓ Visiting Research Scholar, University of Waterloo, Canada (2017)
- ✓ Manager of MAPSA Technology Center (MTC), engaged in developing upstream petroleum software, Tehran, Iran (2010-2014).
- ✓ Reservoir Engineer, Abdal Industrial Project Management Company, Iran (2005-2010).

Projects & Working Experiences

Research Funding

- ✓ Principal investigator, Experimental investigation and numerical modeling of acid injection for EOR purposes by pH-sensitive polymers, Iran National Science Foundation, INSF (2017-2019)

Software Development Experiences (Industry)

- ✓ Project manager & software designer, "Lab Pro", a comprehensive core data library (RCAL & SCAL), visualizing, management, and integration, MAPSA Technology Center (2011-2013).
- ✓ Project manager & software developer, "VFP-Simulator" (2nd version), a multiphase flow simulator in wellbore with artificial lift modeling capability, Client: POGC (2009-2010).
- ✓ Advisor, "Log Pro", to generate missing petrophysical logs using artificial intelligence methods, MAPSA Technology Center (2008).
- ✓ Software developer, "VFP-Simulator" (1st version), a multiphase flow simulator in wellbore customized for gas condensate wells, Client: POGC (2008).

Core Analysis Laboratory Experiences (Industry)

- ✓ Quality control assurance of RCAL & SCAL laboratory data, Abdal Industrial Project Management Co. (2013-2014).
- ✓ NMR measurement and interpretation of Soroush Oil field, Client: IOOC (2013).
- ✓ RCAL supervision of #G5 well of Golshan field, Client: POGC (2010).
- ✓ RCAL & SCAL supervision of #G4 well of Golshan field, Client: POGC (2009).
- ✓ Advisor, Rock and fluid analysis of 19 wells at North Yaran oil field, Client: Persia Co.

Reservoir Engineering Experiences (Industry)

- ✓ Reservoir engineer, Master development plan (MDP), Client: ICOFC (2007-2008).
Fields:
 - Dey,
 - Gordan,
 - SefidZakhor,
 - Mokhtar fields
- ✓ Reservoir engineer, modeling of asphaltene precipitation problem along the wellbore of 5 wells of the Mansori field, Client: NISOC (2007).
- ✓ Reservoir engineer, Geological modeling of North pars gas condensate field using 2-D and 3-D seismic data, Client: POGC (2006-2007).
- ✓ Reservoir engineer, Master development planning (MDP) of Shadegan oil field, Client: PEDEC (2006).

Certificates

- ✓ Advanced NMR analysis and interpretation, LLC R&C GEFES Co., July 2013 (2-week course), Moscow, Russia.
- ✓ Operation training course on Nuclear Magnetic Resonance (NMR), ProtonM20 machine, LLC R&C GEFES Co., Dec 2012 (2-week course), Moscow, Russia.

- ✓ Operation training course on Bench top relative permeameter (BRP350) apparatus, Vinci Co., Feb 2011, Tehran, Iran.
- ✓ Operation training course on acoustic velocity measurement (AVS700) apparatus, Vinci Co., Feb, 2011, Tehran, Iran.
- ✓ Operation training course on three phase relative permeability and Long core apparatus, Alberta Research Council (ARC), 4-30 Nov, 2006, Tehran, Iran.
- ✓ Project Management, Oil & Gas Development Projects from Discovery to First Oil/Gas, Total Co., 20-25 Nov 2004, Tehran, Iran.
- ✓ Integrated Reservoir Management, Total Co., June 19th-July 7th, 2005, Tehran, Iran.
- ✓ Drilling Techniques, Total Co., June 19th-July 7th, 2005, Tehran, Iran.
- ✓ Petroleum System Approach and Exploration Management, Total Co., June 19th -July 7th, 2005, Tehran, Iran.
- ✓ General First Aid Course, Sharif University of Technology, Nov 16th-Dec 30th, 2000, Tehran, Iran.

Languages

- ✓ Persian (Native), English, Spanish (Nivel Avanzado), German (Goethe-Zertifikat A2).

Membership & Communities

- ✓ Member of "International Society of Porous Media (InterPore)"
- ✓ Member of "International Association for Mathematical Geosciences (IAMG)"
- ✓ Member of "European Association of Geoscientists and Engineers (EAGE)"
- ✓ Member of "Society of Petroleum Engineers (SPE)"
- ✓ Member of "Iranian Association of Chemical Engineers"
- ✓ Member of Sharif University of Technology Alumni Society