HIGHLIGHTS

Post-doctoral research associate with 5 years of extensive experience in conventional and unconventional reservoir engineering, IOR/EOR techniques, and petrophysics, particularly in shale reservoirs; have in-depth knowledge of reservoir engineering, rock and fluid properties, fundamentals of reservoir simulation, and two- and three-phase flow in hydrocarbon reservoirs; have extensive hands-on laboratory experience in designing, conducting, and analyzing reservoir-condition RCAL, SCAL, PVT, and core-flooding experiments at various scales (macro, micro, and nano); have extensive experience in image processing and applying digital rock technology to characterize conventional and unconventional reservoirs; have developed deep understanding of pore-scale displacement mechanisms relevant to natural depletion and various EOR processes; possess a strong work ethic; truly believe in the power of teamwork and collaboration; strong desire to expand and develop innovative applied research and programs; have an excellent track record of publications in peer-reviewed journals.

EDUCATION

Ph.D., Petroleum Engineering – University of Wyoming, USA (December 2017) – GPA: 3.96 **B.Sc., Petroleum Engineering** – Amirkabir University of Technology, Iran (May 2012) – GPA: 3.95

PROFESSIONAL EXPERIENCE

Research Associate

- High Bay Research Facility (HBRF), Center of Innovation for Flow through Porous Media (COIFPM), Piri Research Group, Department of Petroleum Engineering, University of Wyoming, USA (2012-Present)
 - Conduct research on various areas of hydrocarbon resources, particularly shale resources and fractured reservoirs
 - Study multi-phase flow through fractured porous media at the pore scale using X-ray tomography
 - Study the effect of varying stress on deformation and multi-phase flow through proppant-packed hydraulic fractures in shale oil, shale gas, and shale gas-condensate reservoirs using X-ray tomography
 - Lead and oversee industrial projects, perform the required tests, analyze the data, compile technical reports, and present the results and recommendations to the managers and clients
 - Collaborate with several Ph.D. students and post-docs and assist them in implementing and examining their research topics
 - Coordinate team meetings to keep projects on track
 - Collaborate closely with the supervisor on research plans and propose new ideas and initiatives

Teaching Assistant

- Flow through porous media, Department of Petroleum Engineering, University of Wyoming, USA (Spring 2015)
- Reservoir rock and fluid properties, Amirkabir University of Technology, Iran (Spring 2012)

Internship

- Aramco Services Company, Houston Research Center, Houston, Texas, USA (Summer 2016)
 Characterized reservoir shale samples using FIB-SEM imaging technique to find the reservoir and production sweet spots
- National Iranian Drilling Company (NIDC), Ahwaz, Iran (Spring 2012)
 - Practiced drilling, completion, and production operations in conventional reservoirs

ADDITIONAL SKILLS

- Design, build, operate, and utilize reservoir-condition, three-phase core-flooding setups
- · Operate X-ray (macro, micro, and nano) CT scanners, QEM-SCAN, and FIB-SEM for high-resolution 2D and 3D imaging
- Characterize conventional and unconventional reservoirs using digital rock technology
- Model various aspects of flow through porous media using pore-scale network modeling approach
- Develop parallel CPU/GPU based algorithms in C, C++, and Fortran environments
- Familiar with commercial reservoir simulation tools such as CMG and ECLIPSE

Maziar Arshadi, Ph.D.

PUBLICATIONS

Peer-Reviewed Journal Publications:

- M. Arshadi, A. Zolfaghari Shahrak, M. Piri, GA. Al-Muntasheri, and M. Sayed (2017), "The effect of deformation on two-phase flow through proppant-packed fractured shale samples A micro-scale experimental investigation", *Advances in Water Resources*, 105, 108-131.
- G. Javanbakht, **M. Arshadi**, T. Qin, and L. Goual (2017), "Micro-scale displacement of NAPL by surfactant and microemulsion in heterogeneous porous media", *Advances in Water Resources*, 105, 173-187.
- M. Arshadi, M. Khishvand, Arash Aghaei, M. Piri, and GA. Al-Muntasheri (2018), "Pore-scale experimental investigation of two-phase flow through fractured porous media", *Water Resources Research*, Accepted.
- M. Arshadi, M. Piri, and M. Sayed (2018), "The effects of varying closure stress and varying strength on the flow of gas and brine through proppant-packed fractured shale samples: A micro-scale experimental investigation", in preparation.
- M. Arshadi, Z. Qin, I. Oraki Kohshour, M. Piri, and M. Sayed (2018), "In-situ study of three-phase flow through proppant-packed fractures in shale plays", in preparation.
- M. Arshadi, T. Qin, M. Gesho, M. Piri and L. Goual (2018), "Incorporating mineral heterogeneity to pore-scale network modeling", in preparation.
- A. Zolfaghari, M. Sabti, **M. Arshadi**, GA. Al-Muntasheri, and M. Piri (2018), "Micro-scale investigation of polymeric gel placement and its breakthrough path using 3D X-ray imaging", in preparation.

Conference Papers and presentations:

- S. Kazmouz, M. Arshadi, A. Aghaei, and M. Piri (2016) "Micro-scale modeling of matrix-fracture interactions in fractured porous media", paper SCA2016-090, proceedings of the International Symposium of the Society of Core Analysts, Snow Mass, Colorado, USA, 21-26 August.
- M. Arshadi, M. Khishvand, Arash Aghaei, M. Piri, and GA. Al-Muntasheri (2015), "Micro-scale experimental investigation of matrix-fracture interactions in fractured porous media" presented at the SPWLA 2015 Spring Topical Conference, Stevenson, Washington, USA, 3-7 May.

HONORS AND AWARDS

- A member of the Wyoming Alpha chapter of Tau Beta Pi, the national engineering honor society (2016-present)
- A member of Phi Kappa Phi, the national honor society (2016-present)
- Full Ph.D. scholarship, Piri's Research Group, University of Wyoming, USA (2012-2017)
- Full Bachelor scholarship, Amirkabir University of Technology, Iran (2008-2012), Ranked 1s

REFERENCES

- Mohammad Piri, Ph.D.
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 Associate Professor, Department of Petroleum Engineering, University of Wyoming, USA lgoual@uwyo.edu
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